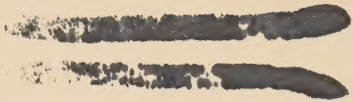
SOUTH AMERICA

FRANKLIN H. MARTIN



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SOUTH AMERICA

Cordially yours, Calvin Coolidge.

During Doctor Martin's visits to South America in 1921 and 1925, and to Panama in 1925, he interviewed the Presidents of the Republics of Panama, Peru, Argentina, Uruguay and Brazil in regard to establishing in Panama a memorial to General William C. Gorgas in the form of an Institute of Tropical and Preventive Medicine. President Coolidge has received with deep interest frequent progress reports of the Gorgas Memorial, of which he is the Honorary President, and he has generously consented to the use of his photograph as the frontispiece of "South America."

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SOUTH AMERICA

AMPLIFIED TO INCLUDE ALL OF LATIN AMERICA; THE VANDYCK CRUISE

BY

FRANKLIN H. MARTIN, C.M.G., D.S.M., M.D., LL.D., F.A.C.S.

Director-General, American College of Surgeons; Editor, Surgery, Gynecology and Obstetrics; President, Gorgas Memorial Institute of Tropical and Preventive Medicine, Inc.

INTRODUCTION BY

WILLIAM J. MAYO, M.D., D.Sc., LL.D., F.R.C.S. (ENG., EDIN., IRE.), D.S.M.

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BY

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FOREWORD

THE notes which appear on the following pages were gathered during visits to Latin American countries in behalf of the American College of Surgeons. The first voyage, in company with Dr. William J. Mayo, of Rochester, Minnesota (then President of the College), was begun on January 7, 1920. We sailed from New York on the SS. *Ebro*, an 8,000-ton steel ship flying the British flag, and our itinerary included Jamaica, Panama, Peru, Chile, Argentina, and Uruguay.

On January 29, 1921, we again sailed from New York on the SS. *Ebro*. On this occasion Dr. Thomas J. Watkins, of Chicago (a Governor of the College), accompanied us, and we included in our itinerary all of the countries visited the previous year, with the addition of Brazil. Dr. Francis P. Corrigan, of Cleveland, a Fellow of the College, had preceded us on our second visit, in 1921, for the purpose of surveying medical conditions in Ecuador and Bolivia, and he made an official visit in 1922 to Brazil, Uruguay, Argentina, Chile, Peru, and Panama.

In the early months of 1922, Dr. Albert J. Ochsner (then President-elect of the College) and Dr. William J. Mayo visited some of the larger cities of Mexico, and Dr. Edward L. Salisbury, of Denver, made an official trip in behalf of the College to Colombia, Venezuela, and Cuba. Dr. Salisbury also visited, in the spring of 1924, Cuba, Guatemala, El Salvador, Costa Rica, Nicaragua, Dominican Republic, Porto Rico, Panama, Bolivia, Peru, and Venezuela; and in 1925 Brazil, Uruguay, Argentina, Chile, Peru, Panama, and Cuba.

On February 10, 1923, representatives of the College from thirty-five states of the United States and five provinces of Canada sailed from New York on the SS. *Vandyck* and visited Cuba, Panama, Colombia, Venezuela, Brazil, Uruguay and Argentina; and fifty members of the Cruise party crossed the Andes and returned to New York by way of Chile, Peru, and Panama.

This little volume, therefore, is actually a collaboration, my own notes being supplemented by excerpts from articles by Dr. William J. Mayo and Dr. Thomas J. Watkins, from an

official report by Dr. Francis P. Corrigan, and liberal contributions by Dr. Edward I. Salisbury.

From the standpoint of the surgeon, the trips had interest in the medical schools, the hospitals, and the operating surgeons of the countries we were privileged to visit. Although the voyages were made in a purely professional capacity in behalf of the American College of Surgeons, one cannot describe them properly without relating some of the unusual personal experiences we enjoyed, which will have interest for the layman as well as the medical man.

It is only fair, and it affords me great pleasure, to give credit to the Travel Departments of the American Express Company, and of Thos. Cook & Sons, for conducting our tours and attending to all of the details of travel in countries the languages of which were unfamiliar to us.

I wish, too, to express my appreciation to the Departments of State and Foreign Relations, the Latin-American governments and their diplomatic representatives in Washington, our diplomatic representatives in Latin America and to Dr. L. S. Rowe, Director-General of the Pan-American Union and his efficient staff for helpful advice which they have given in regard to Latin-American countries, and for valuable letters of introduction. Also, I wish to acknowledge my obligation to Miss Eleanor K. Grimm who accompanied us, compiled the summary of important historical and statistical data relating to the Latin-American countries which appears in the addenda, and, in co-operation with Mr. Albert K. Dawson, took many of the illustrative photographs and prepared them for publication.

In compiling our Spanish vocabulary we placed ourselves under obligation to Mr. W. J. Hernan, who has prepared several little volumes containing vocabularies of different languages.

FRANKLIN H. MARTIN.

INTRODUCTION

By William J. Mayo, M.D., Rochester, Minnesota

THEODORE ROOSEVELT, with characteristic courage and vigor, overcame all opposition and caused the Panama Canal to be built. The dream of nearly five centuries was realized. The whole world is forever Roosevelt's debtor. By the severance of the land connection between North and South America these two continents are now united as never before. The long, hazardous routes of travel of the olden time have been replaced by new ones, safe and speedy. The great war came so quickly after the completion of this epoch-marking achievement that it has not as yet touched Pan-American imagination.

In company with Dr. Franklin H. Martin, I visited Peru, Chile, Argentina, and Uruguay, and with Dr. Albert J. Ochsner, some of the larger cities of Mexico. We saw some of the important surgical clinics, and became acquainted with and observed the methods of many surgeons, and I take this opportunity to pay merited homage to these men of science, learned in surgery. It is but just to say that in their hospitals and operating rooms they are the equal of any representative group from any country in the world. They have that intuitive clarity of thought and facile mastery of technique which we associate, and rightly, with the French and Italian schools. The surgeons of Latin America have recognized for a long time the necessity of frequent clinical trips to observe the work of foreign surgeons; of late years many of them have come to the United States; it has been always a pleasure to know them.

Their medical schools are splendid institutions with a seven year course, and are the equal in equipment and methods of theoretic teaching of any in the world. In Latin America "Commencement Day" means just that, for after graduation the young surgeon begins a special course of surgical training. Instead of carving his way to knowledge and experience by the scalpel, he is tutored for a period of from eight to ten years along lines which we of the United States have accepted only

recently under the general term of fellowships in graduate medicine and surgery.

The hospitals of the Latin-American countries are imposing, built for the tropics, and associated with the medical schools. The hospital records are the best I have ever seen; this is true of every hospital we visited, small or large.

The reception given us by our Latin-American confrères was most cordial, and we came away with not only admiration for the Latin-American surgeon as a surgeon, but also with a feeling of personal friendship for him that will last for life. Whatever may be the after-war responsibility of the United States abroad, we cannot question that our first duty is to develop a sound Pan-Americanism. A Pan-Americanism of science, a unity of the spirit and ideals, will be more lasting than measures based on financial, commercial, or political considerations.

In 1921, Dr. Franklin H. Martin, Director-General of the American College of Surgeons, in company with Dr. Thomas J. Watkins, a Governor of the College, revisited the South American countries. They received the same cordial welcome that had been extended to the party the former year and the affiliation between the great surgeons of South America and North America begun in 1920 was furthered. Other official visits have been made to South- and Central-American countries by representatives of the College.

As such medical visits to Latin America have not been frequent, it has seemed worth while to publish the account of the trips in book form in the hope that the surgeons of the United States and Canada may have some little understanding of situations in our sister republics to the south and that others may be induced to travel in these charming countries, partake of the hospitality of their people, and learn at their source of the medical conditions. After considerable urging Dr. Martin kindly consented to undertake the task, and to his wife, Mrs. Isabelle Hollister Martin, are we indebted for interesting supplementary notes and for a few of the photographs which illustrate the text.

OUR ITINERARIES

1920

January 7—Sailed from New York
January 13—Kingston, Jamaica
January 16–17—Panama Canal
January 22–24—Lima, Peru
January 26—Mollendo, Peru
January 27—Arica and Tacna, Chile
January 28—Iquique, Chile
January 29—Antofagasta, Chile
January 31—Coquimbo, Chile
February 1–14—Two weeks on shore with visits to Valparaiso, Santiago, thence by rail over the Andes to Buenos Aires, La Plata, and Montevideo, on the east coast
February 14—Returned by rail to Valparaiso
February 29—Panama Canal
March 2—Kingston, Jamaica
March 8—New York

1921

January 29—Sailed from New York
February 2—Havana, Cuba
February 6—Panama Canal
February 11–13—Lima, Peru
February 15—Mollendo, Peru
February 16—Arica and Tacna, Chile
February 17—Iquique, Chile
February 18—Antofagasta, Chile
February 20—Valparaiso, Chile
February 21–23—Santiago, Chile
February 23—Los Andes, Chile
February 24—Mendoza, Argentina
February 25–March 5—Buenos Aires, Argentina
March 6–9—Montevideo, Uruguay
March 12—Santos, Brazil
March 14–17—São Paulo, Brazil
March 18–April 9—Rio de Janeiro, Brazil
April 19—Barbados, West Indies
April 25—New York

Dr. Francis P. Corrigan

1920–1921

December 21, 1920—Sailed from New York
December 28—Panama Canal
January 1, 1921—Guayaquil, Ecuador
January 5—Quito, Ecuador
January 10—Guayaquil, Ecuador
January 17—Callao, Peru
January 27—Antofagasta, Chile
February 1—La Paz, Bolivia
February 18—Antofagasta, Chile
March 7—Panama Canal
March 18—New Orleans

1922

February 2—Sailed from New York
February 17—Rio de Janeiro, Brazil
February 23—São Paulo, Brazil
February 28—Montevideo, Uruguay
March 2—Buenos Aires, Argentina
March 6—Santiago, Chile
March 11—Valparaiso, Chile
March 22—Lima, Peru
March 27—Panama, Republic of Panama
April 2—Key West, Florida

Dr. Mayo and Dr. Ochsner

1922

March 4—Left Chicago
March 5—San Antonio, Texas
March 6—Laredo, Texas
March 8–9—Mexico City
March 10—Guadalajara
March 11–24—Colima, Lake Chapala, Queretaro
March 26—Guadalajara
March 27–28—Mexico City
March 30—Laredo, Texas
March 31—San Antonio, Texas
April 1—Chicago

Vandyck Cruise

1923

February 10—Sailed from New York
February 14—Havana, Cuba
February 18—Panama
February 20—Cartagena, Colombia
February 23—La Guayra and Caracas, Venezuela
February 25—Port of Spain, Trinidad
March 7—Rio de Janeiro, Brazil
March 11—Santos and São Paulo, Brazil
March 16—Buenos Aires, Argentina
March 22—Montevideo, Uruguay
March 28—Rio de Janeiro, Brazil
April 8—Bridgetown, Barbados
April 14—New York

West Coast Return Trip

March 21—Left Buenos Aires, Argentina
March 23—Santiago, Chile
March 24–25—Valparaiso, Chile
April 2—Lima, Peru
April 7—Panama
April 11—Havana
April 15—New York

Dr. Edward I. Salisbury

1922

January 18—Sailed from New York
January 25—Colon, Panama
January 27—Cartagena, Colombia
January 29 –Puerto Colombia, proceeded to Barranquilla
January 31—Lower Magdalena—River boat for La Dorada
February 8—La Dorada, proceeded by rail to Beltran
February 8—Upper Magdalena
February 9—Girardot
February 10—Via Girardot and Sabana Railways to Bogotá
February 21—Bogotá to Girardot
February 22—Girardot
February 23—Honda, by rail-motor-car to La Dorada
February 24—Lower river boat to Barranquilla
February 28—Barranquilla
March 3—Barranquilla to Puerto Colombia by rail

March 6–7—Curaçao, Dutch West Indies
March 8—Puerto Cabello, Venezuela
March 9—La Guayra, by rail to Caracas, Venezuela
March 18—Puerto Cabello, Venezuela
March 19—Curaçao, Dutch West Indies
March 24—Cartagena, Colombia
March 25—Panama Canal
April 2–3—Puerto Limón, Costa Rica
April 6—Havana, Cuba
April 17—New York

1924

February 23—Sailed from New York
February 28–29—Havana, Cuba
March 2–3—Belize, British Honduras
March 4—Puerto Barrios, Guatemala
March 5–14—Guatemala City, Guatemala
March 15–25—San Salvador, El Salvador
March 25—La Libertad, El Salvador
March 26—La Union, El Salvador
March 27—Corinto, Nicaragua
March 28–April 5—Managua, Nicaragua
April 8—Punta Arenas, Costa Rica
April 9–25—San José, Costa Rica
April 26—Port Limón, Costa Rica
April 27—Cristobal, Canal Zone
April 28–May 8—Ancon, Canal Zone
May 17–19—Arica, Chile
May 20–29—La Paz, Bolivia
May 30–31—Guaqui, Bolivia
June 2–4—Puno, Peru
June 5–7—Cuzco, Peru
June 8—Juliaca, Peru
June 9–12—Arequipa, Peru
June 15—Callao, Peru
June 16–July 12—Lima, Peru
July 18–24—Ancon, Canal Zone
July 26–August 11—Kingston, Jamaica
August 14–15—Barahona, Dominican Republic
August 17–26 Santo Domingo, Dominican Republic
August 29–September 16 San Juan, Mayaguez, and Ponce, Porto Rico
September 18–19—Curaçao, D. W. I.
September 20—Puerto Cabello, Venezuela

September 21–23—Caracas, Venezuela
September 24–25—Puerto Cabello, Venezuela
September 26–29—Curaçao, D. W. I.
October 1–2—Barranquilla, Colombia
October 3—Cartagena, Colombia
October 4–9—Panama
October 16—New York

1925

May 29—Sailed from New York
June 13–July 4—Rio de Janeiro, Brazil
July 5–17—São Paulo, Brazil
July 18—Santos, Brazil
July 22–26—Buenos Aires, Argentina
July 27–August 5—Montevideo, Uruguay
August 5–September 23—Buenos Aires, Argentina
September 25—Mendoza, Argentina
September 26–27—Valparaiso, Chile
September 28–29—Santiago, Chile
September 30—Valparaiso, Chile
October 7—Lima, Peru
October 12—Panama
October 19—Arrived New York

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PART I

DESCRIPTIVE

CHAPTER I

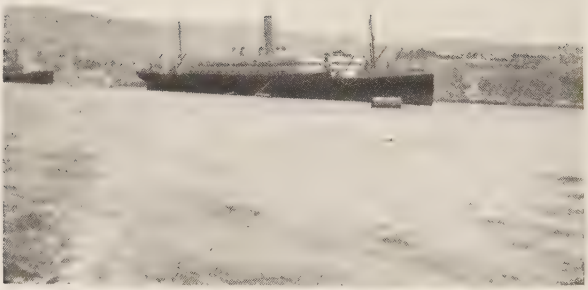
THE VOYAGE

IT IS an ordinary experience to board an ocean liner and be deposited in one week in Liverpool or Cherbourg. It is, however, an unusual experience for a North American to board a commodious steamer for a sea voyage of several weeks to our southern continent. Especially is it unusual if one leaves the United States when the temperature is ranging from zero to 10° below, with the necessity for winter garments, and finds oneself three days out of New York in the warm Gulf Stream, with the tropics in anticipation, and summer clothing in demand.

On each of our trips to South America we sailed from New York, drifted down the Hudson River, past the great sky scrapers and the Statue of Liberty. As we waved farewell to the Palisades, with their snow capped columns, we realized that we were leaving the wintry climate of the United States and were started on our voyage to the southern continent, and summer. While the Statue of Liberty was still bestowing her silent blessing upon us, the liberty-loving Americans were gathering in the comfortable smoking room and drinking toasts to the snow-bound inhabitants of dry America.

After two days of cool weather, but a comparatively smooth sea, we enjoyed the sunshine and warmth of the Florida coast, with St. Augustine, Ormond, Daytona, Palm Beach, and Miami easily discernible.

In 1920, we chose the West Coast for our down trip, and in 1921 and 1923 the East Coast. New York to Valparaiso, or New York to Buenos Aires, whichever course is selected, with intervening stops at a few interesting ports, represents the first arm of the sea voyage which may be summarized by the one word "ideal." At no time was there a sea of sufficient roughness to cause one the slightest discomfort. The sun shone almost continuously, and there was but one rainfall, and that in the small hours of the morning when the ship's



SS. EBRO

voyagers were asleep. After passing Cape Hatteras the temperature on shore or ship was never above 85° F. nor below 50°. It was possible to sit on deck at all times with light wraps or none at all, and, fanned by a cool breeze that was always present, read a book, dream over a cigar, or while away the time enjoying the companionship of old friends or those newly made, and at will supply the inner man with the good things which were afforded by the well-equipped ship which was sailing on a sea that was always "wet." The climate for the entire period of our journeys was like the most perfect June day in Chicago when a gentle breeze is blowing from off the lake. Considering these ideal weather conditions, and our splendid boat with canvas canopies over the broad decks, with much space in which to exercise, with comfortable chairs, with music in the lounge, with a well-stocked smoking room, with salt and fresh baths, with a swimming pool, and, to cap all, with comfortable beds and the usual, clean, plain table of a well-conducted ship, supplemented by strange fruits from tropical parts, one would have to be especially difficult to please if he could not find here contentment and satisfaction. It must become the overworked and the tired man's paradise.

WHEN SHOULD ONE VISIT LATIN AMERICA?

WHEN should a resident of the United States make a vacation trip to Latin America? This will depend upon the object of the journey and the tastes of the traveler, as well as his desire to recreate in a new world. The full thrill of a visit to South or Central America, from a climatic standpoint, may be obtained by leaving New York in January or February, after one has experienced some of the severities of zero weather in our northern states. A most satisfying contrast is apparent between New York weather in those months and that which is prevalent three days afterward in the Gulf Stream off Florida and the Bahamas, followed by the approach to Cuba, Jamaica, and Panama, with the delightful tropical atmosphere and a summer sea. In January and February the heat in the Caribbean Sea and the Pacific Ocean is not so intense as that which will be found later, when the sun is well back from its excursion to the southern zone. Therefore, the dreaded heat of the Equator is not to be feared in these early months; and when the perpendicular rays of the sun are met, the Humboldt Current along the west coast cools the sea and fans the atmosphere.

And when one reaches the countries of the southern continent in February and March, while it is the time of their summer, the climate is much like San Diego or Pasadena during the same months, the temperature varying from 65° F. to 85°, with cool nights, and comfortable days if one is not exposed to the direct rays of the sun. At this time of the year, the members of society are residing in the country. But, unlike the custom in our country, the summer homes of these people are in rather close proximity to their winter homes in the beautiful suburbs and nearby towns or country estates. However, at this season one cannot enjoy the attractive social features of winter life, with the operas, the theaters, the gaieties associated with the season's races, and the general winter life of the people in their city homes. For this reason the society devotée, the seeker of the gaieties of these attractive, cosmopolitan centers, the one wishing to study the people in the making of their laws, in their normal social intercourse, and in their educational institutions, should go to South America during their fall, winter, and early spring, or our May, June, July, August, September, October, and November.

Anyone who desires a vacation and who will be satisfied to visit the countries to the south at a time corresponding to our June, July, and August, will be more than content with

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A M E R I C A
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GUIANA
BRAZIL
SOUTH
AMERICA
PACIFIC
OCEAN
RIO DE JANEIRO
SAN PAULO
VALPARAISO
ARGENTINA
Wellington
FALKLAND IS

THE MAP

the bird's-eye view of their institutions, with the novelty of travel, with the external beauty of the different countries, and with the consciousness that he is escaping the severe winter of our northern climate and enjoying an ideal summer atmosphere in a most fascinating environment.

To summarize: For charm of change from severe winter to most desirable summer, for a long sea voyage without heat or storm, for a view of the continent in its summer garb, for a visit to cities divested of the members of society but with much remaining to interest and please, leave the northern continent in January or February. For a view of the social life and of the society people living a normal and active life in the cities, and with disregard of the charm of change in climate, visit Latin America during their winter, our summer.

LOOK AT THE MAP

HOW few realize that the western coast of South America is on a line with the eastern coast of the United States! A plumb bob dropped from New York would pass to the east of Cuba, through the Panama Canal, and hang on a perpendicular line in the harbor of Valparaiso. During the three weeks' cruise from New York to Valparaiso, directly south, there is not the usual distraction of changing one's watch. The western coast of the United States is nearly four thousand miles west of the most westerly point of South America and the Panama Canal, so that in traveling from San Francisco to Valparaiso or Lima one would change his timepiece one hour on three different occasions. The eastern coast of Brazil is fully as much farther east and more nearly approaches the longitude of England than of New York. Buenos Aires is 1 hour, 2.4 minutes, and Rio de Janeiro, 2 hours, 3.2 minutes east of New York.

South America is a mountainous country. Brazil has four main series of mountain ranges: The Andes in the northwest, the Central, the Northern, and the Coastal range along the Atlantic Ocean which extends from Bahia to Uruguay, a distance of approximately 3,000 miles. Central America is generally mountainous. Its cordillera extends from the Sierra Madres of Mexico to the Andes in South America, and contains a number of active volcanoes.

The Andes mountain ranges border on the entire western coast of South America and many of their highest peaks are observable from the sea. These mountains are full of the richest minerals and they have been scarcely scratched by

modern mining methods. A rainless coast and most beautiful valleys are lying below ready to have the water from the mountains poured onto their soil, which will make them produce and become as beautiful as the reclaimed deserts of California. The earlier inhabitants of Peru appreciated and utilized these facts and made themselves the envy of the later civilizations who conquered their predecessors for their wealth, and who now, after four centuries have passed, are about to imitate the earlier methods, utilizing for the purpose all of the added facilities of modern science.

DIVING BOYS, KINGSTON, JAMAICA

CHAPTER II

OUR SOUTHERN NEIGHBORS

By Edward I. Salisbury, M.D., F.A.C.S.

IN everyone who lingers in any of the countries of our southern neighbors a spirit of investigation is evoked. We are stimulated to delve a bit deeper into the history of the country and into the origin of these people of Hispano-American blood. This leads to a study of the history of Spain, its people and their native tongue, and prods us to browse among dusty books and mouldering archæologic monuments for light upon the history, life and customs of the aborigine, so elemental in the evolution of our Latin American. We study the native Indian, the true descendent of the aborigine; and the Spanish-Indian or Hispano-American, the new product in Latin America. We seek to know their character, to learn their psychology, their process of reasoning, their philosophy, and their reactions.

Little by little we have been adding fragmentary bits to the magna in the filter and already the crystallizing process has begun and we are acquiring more definite ideas as to what constitutes Latin thought and policies. Indeed, we are arriving at a better understanding of the Latin American. In reality, he is more capable of analysis than the North American. His elementals are more constant. He is either purely European or a mixture of Iberian and Indian blood, while we—who are we? What constitutes a North American today? We are told that some of our cities rank third, fourth, fifth, and so on to British, French, Russian, Italian, German, Scandinavian, and Czech metropolitan centers. What will result when the cauldron is well stirred and the mixture complete? Will the so-called North American type retain its identity? Or will we evolve into something new?

We may look to the past for answer—the mixture of the Nordic and the Gall, the Goth and Iberian, the Lombard and

"SPOTLESS TOWN" AND PONTOON BRIDGE, WILLEMSTAEDT

Roman. Even as these lines are penned a new world example presents itself. From a balcony in Otrabanda one may look out on the harbor of Curaçao, of the Dutch West Indies, and across to the town of Willemstaedt. The pontoon bridge has just swung back after permitting a Dutch oil tanker to pass out of the harbor to the sea. The waiting crowds rush eagerly from one end of the bridge to the other, paying a toll as they pass the gate: one cent if barefooted, and two cents if they are wearing shoes. They are the usual crowd that crosses any bridge. Their elements were native Indian and Carib, mixed with the Spanish, conquered by the English, and now ruled by the Dutch. They have intermingled their blood until they themselves are an entity and do not run true to the form of any of their component parts. They are seafaring like the Carib, thrifty and cleanly as the Dutch, have the business instinct of the English, and the romance of the Spanish. Their language is a mixture of all, *papiamento*. They use a sprinkling of English, Spanish and Dutch words, and then a gibberish like the unknown tongue at a voodoo ceremonial.

Today, in the United States of North America, as Anglo-Americans, we speak English. In South America, as Iberio-Americans, the populace speaks Spanish or Portuguese. Each group has its traditions. Let us hope that we may all retain our native tongue and identity, regardless of the heavy immigration of the past or the developments of the future.

There is a wealth of material on observations of the people —the Indian, the gentry, and the intellectual classes; the customs of civilizations, past and present; the crumbling monuments of almost forgotten kingdoms and of the culture erected over them. But this must be reserved for the future.

CHAPTER III

THE SEA

By Edward I. Salisbury, M.D., F.A.C.S.

HEN the cold, wintry winds are blowing, when the sky is dark and sullen overhead, when the snow begins to hide with her ermine coat the brown and ungracious covering of Mother Earth in northern latitudes, when the problems of woolens, galoshes, overcoats and coal are uppermost, when there are parties, dances, "at homes," and bridge, and one replies with "thanks" or with "regrets," and when the humdrum of existence becomes monotonous, did it ever occur to you that you have grown tired of your little section of the sky, that you are just restless and don't know why? Is there no gypsy blood in your veins to tell you that you should have flown southward with the robins? Is there no spirit of adventure latent there, to lead you over windy seas, to sunny lands, by perilous tracks, through dim forests, across wide sabanas, rolling plains and thirsty deserts?

Most of us have a bit of Romany blood in our veins, and once we have visited the tropics, an affinity is formed with the brilliant days and peerless nights that produce a symptom-complex which thereafter becomes peculiarly manifest with the first frost. Some call it the "lure" and some the "thrall" of the tropics. However, when conditions are right and the air is chill and a restlessness appears,

> You'll hear that voice a-calling you, which never calls in vain;
> With the longing of a lover, you'll return to it again.

The road to the Southland is an unfurrowed sea, beneath a sky that is gray and murky. The weather with its biting wind, combined with the icy decks of the steamer, are no inducement to remain without. So you to your cabin to arrange your things and lay out your light-weight suits and make out your income tax report for the coming fifteenth of March, for, mind you, these little details must not be forgotten. The

morrow and another day will find you around the bend where hang the sullen mists, and down in balmy southern weather. It is then you stir from your solitude to bask in the bright sunlight, to feel the spray of salt upon your face and drink in the pure air from off the sea. You are sailing south to seas of blue, beneath skies of a deeper hue, and there is wafted to you the old tang of the sea and the warming breeze. The soothing freshness of it all makes your cares drop away like leaves before the autumn blast.

The combinations of nature by the sea or on its broad expanse are not to be found elsewhere. There may be beauties rare in the land of the midnight sun, and there may be music in the stirring leaves of the forest or in the wind singing in the mountain pines, but have you ever walked by night along the Condado beach at San Juan and listened to the rustling fronds of the coco when trade winds blow, or to the roar of the ocean as it combs across the outer reef and rolls gently upon the shore? Have you ever seen an August full moon rise just off the point and break through a cloud bank with its cold, yellow light flooding the scene, turning now to silver, sending a glorious pathway to your very feet, the whitecaps along the distant reef, with their spray and foam, catching up the light and reflecting it as a delicate lace and filigree of silver? There is in it all a loveliness and a beauty exquisite.

Have you ever watched the sun wrap his cloud blankets about him and go to rest in the Pacific from the strand at Acajutla? Have you seen him gather up those rich purple, crimson-edged robes and sink into his cerulean bed, a flame of scarlet, tipping the distant sail with his fire? Have you listened then to the gentle lapping of the dying swells upon that shelled beach? There is in it the music of tinkling cathedral bells, a music not known to the beach of sand but given only to one made of countless little shells and miniature spirals common to the Pacific.

There is no hour of night or day that finds the sea at a loss to offer you some rare gem. At night during the dry season among the islands in Panama Bay, from Taboga to Otoque or San Miguel, the phosphorescent wake of the boat illuminates the sea, a sight never to be forgotten. Due to the agitation of the innumerable animaliculæ carried into the bay by the Humboldt Current at that time of year, these small jelly-like animals give off a peculiar greenish-yellow light that adds an attraction to the sea which makes sailing at night entrancing.

To stand upon Ancon Hill in early morn and watch that brief period of a tropical dawn and see the sun rise out of

Panama Bay and the Pacific is a picture no artist can paint. The crowing cock sounds the clarion call that heralds the coming day; the twinkling lights in the slumbering city below grow dim as the dark night fades to gray; a faint streak of light pencils the hazy horizon, and gradually widening, gleams as silver, lending its soft metallic lustre to gray clouds on a field of blue. As the first color of the sun's disk peeps above the horizon, the blue and silver mists take on the rose of the diamond; the light creeps out upon the placid sea and the surface is aflame with the opalescence of the pearl; each ripple reflects the purple of the amethyst, the blue of the sapphire, the gold of the topaz, and is fired with the flame of the changing opal. The beauty is evanescent. A few seconds and the day breaks forth with surprising suddenness, exposing the phantom sails and shrouds of the enchanted harbor as workaday ships in a commercial port. These few seconds of a fleeting dawn are but a small part of the joys the sea has to give, which lead us from the sordid things and teach us, too, that loveliness may lie hidden in the common place if we but seek it in a kindly light.

Then there is the dawn, oriental in coloring, with its shadows and grays mixed with the orange and yellow of early light, looming up behind the musty forts and ancient walls, the domes and towers of Cartagena, with the swooping pelicans and picturesque sails in the harbor; the wondrous Madonna blue of the Caribbean, as seen after a rain in late afternoon, between the green slopes and above the low-drifting airy clouds in the mountains above La Guayra. But the pictures only tell you more of the sea, beautiful ever, in tempest and in calm.

The sea in its moods resembles life and lends itself to many interpretations. It reacts to forces from within and without and displays exteriorly its every emotion. There is the joy of living in the choppy sea with a sprightly wind, whirling aloft the lacy spray in sun-made patterns of lights and colors; there is the gaiety and din of the world in the blowing gale, passions flow in the fury of the tempest, and the struggle of life in the crashing wave; there is the shadowed frown from each passing cloud, and a song of the soul in the howling wind; the funeral dirge, the choral hymn, and the serenity of passing in the dying storm; a content and peace in the great silence of the calm, and in the growing darkness, as each twinkling star appears in the rounded dome of the heavens, there comes a trust grander far, and a faith more sublime, in the Creator of it all.

And so, as you go from land to land, the sea will be your friend. There is something in the presence or the atmosphere of the sea that invigorates not only the physical energies of man, but the moral energies as well. Weary from travel, you will come back to it to rest. It will be to you the touch of home near foreign shores; its ships will bring daily papers, weeks old, and a stranger just out with the latest news. You will consult them both, for reserve is lost and a stranger is a friend if he comes from home.

But let us not tire you more with the sea for you are restless to peep at a tropic isle, or a tangled jungle, or the heights of the altiplano; so follow then

> Over oceans of wonder by headlands of gleam,
> To the harbors of youth on the wind of a dream.

CHAPTER IV

CUBA

By Edward I. Salisbury, M.D., F.A.C.S.

THE freedom of the seas is a wonderful thing—if not a bulwark, it gives at least a stimulus to the North American constitution. Night falls with a biting wind howling through the shadowy masts with their derricks and ropes. By bedtime a glance from the starboard rail reveals the fact that the good ship has left Barnegat and the lights of the Jersey shore far behind.

On the morrow a clearing sky and a balmy softness of the air greet you. The nearness to the Gulf Stream is already noticeable by the moderation in the weather. This sudden change is sufficient—the spell is upon you, and lo! you no longer steam in a modern ship with the Stars and Stripes or the Union Jack floating above, but sail straight away upon a goodly bergantin, flaunting at the mizzentop the gold and red emblem of Spain.

The history of the Main, with its tales of conquest, of adventures, of colonization, and of piracy is perhaps better known among the nations of the world than the interesting story that accompanies the march of civilization to India, Australia, or to our own northern continent. The very mention of the name recalls many a romantic tale and conjures up the dreams of our boyhood past, when the midnight taper burned low and the blood curdled in our veins as the harrowing details unfolded, disclosing the buried treasure or the doings of a Pizarro or L'Olonois. An enchantment still reigns over those seas, coasts and islets, and a red-blooded man with a God-given imagination cannot sail the Main but that the comfortable ocean liner as by magic fades away, and he finds himself pacing the deck of a phantom ship.

Starboard the helm, and off for the Windward passage!

Swiftly through the foaming sea, shoots our vessel gallantly;
Still approaching as she flies, warmer suns and brighter skies.

And so we stood out to sea with well-filled canvas while the ropes creaked under the strain and the sailors fell to their chanties.

Upon a morn the cry of land went up and there on the port was Watling Island, or San Salvador. It recalled the day-break of October 12, 1492, when the weary watch first called out: "Land! Land!" In the mists hovering over the isle were three phantom ships riding peacefully at anchor in the cove, while ashore knelt a little band, and across the waters their voices arose, chanting hymns of thanks to their Maker for the newfound land.

Soon we were in the quiet waters of the Windward passage, and our course laid, to avoid Tortuga, near Cape Haitien—Tortuga, that rendezvous for the wolves of the sea—whither an Esquemeling led his zee rovers, a L'Olonois his corsairs, and a Morgan his buccaneers. Suddenly from behind a cloud-bank the clumsy galleon of a Portingale loomed up, her pennons waving in the breeze. In hot pursuit followed a brig flying the black flag of death. The pursuers gained a pace and came alongside their prize. They scuttled the brig that they might fight the harder, and boarded. In the sulphurous air was heard the crack of harquebus and pistol, while cries went up with every cut and thrust of the blade. A plank was pushed out over the high poop deck, and one by one, to the goad of a boat hook, the defeated went to their death. Some few met their end aloft and were left to dangle from a yard-arm, an example to all comers.

What matter it if in a dream we lose a few hundred years and give a passing thought to those heroic deeds, now brilliant pages in the history of our war with Spain?

IN the peaceful hush of a tropical morning, clothed in a garb of tangled verdure spread out beneath the blue field of a tropical sky, Cuba will greet you. East as far as the eye will reach are the vegas with verdant fields of cane. West, in Pinar del Rio, grows the mellow leaf of the tobacco, your Havana Stout. Tempestuous nature has endowed this land with a variety of palms and plants in such a tumultuous but gorgeous confusion that the magic of the island will grip you, a sort of "knee deep in June" feeling, if your soul is poetic.

A white line forward attracts, the breakers on the Playa at Marianao, which grows to be the showy villas on the Vedado, then the Malecon, and then the good ship passes beneath the fortresses of El Morro and Las Cabanas; the ship glides past the silent guns in the moss-grown embrasures, past the gray

MORRO CASTLE, HAVANA

and empty sentry boxes, and drops anchor in the harbor of Havana. The harbor where our *Maine* lay buried for so many years is a very busy one, and the docks and wharves are all of modern construction.

Havana, the city of pleasure, the city of adventure, the city of American history so well known, needs no description. It has science and art, business and diversion, romance and amusement, within its walls and without. It is cosmopolitan and friendly. The traveler and new resident are alike welcome. The city is a mixture of the old and the new, churches and edifices of Spanish design beside modern steel and concrete buildings. The boulevards and drives and the new residential suburb, Marianao, are beautiful. There are historical places to visit where one may speculate on the past, or there are the Casino, the race track, and the *jai alai* games where one may gamble on the future. Havana has several clubs, but the Country Club possesses the prize golf course, where royal palm trees constitute hazards, along with two brooks and a sizeable river.

ON the occasion of the SS. *Vandyck* Cruise of the American College of Surgeons, our committee was met in Havana by a group from shore. First was our genial and strenuous Major General Enoch H. Crowder, who within the hour had received almost simultaneously notices from the State Department and

the War Department of Washington announcing, first, his appointment as Ambassador to Cuba (a newly created position), and, second, his retirement as Major General of the United States Army. Next several of our medical colleagues, and representatives of the President of the Republic, Señor Dr. Alfredo Zayas. Following the formal greetings and the necessary photographing by an enterprising group of journalists, we were informed that the President was to receive us at four o'clock in the afternoon, and the other details of our day's program were arranged.

At the Seville Hotel, where practically all members of our party lunched, Ambassador Crowder and his staff were our personal guests. In the midst of the luncheon an announcement was made of the new honors that had come to our great friend, General Crowder, and the enthusiastic applause he received brought him forward to make his first speech as United States Ambassador to Cuba. Following his talk, the luncheon was almost forgotten because of an impromptu reception line that was immediately formed by our people who wished to shake the hand of the man who had organized the Selective Service Draft for the Great War with so much success. It was an event for us, and obviously pleased the new Ambassador.

At four o'clock, Ambassador Crowder appeared and led the procession that proceeded two by two on foot from the hotel to the President's palace, two blocks distant. Our long line of people, headed by the man who has become a great friend to Cuba, attracted the attention of the many pedestrians on the streets. On arrival at the palace, we were received by the President and his Señora, who were assisted by the officials of our party and Ambassador Crowder.

Several interesting drives about Havana were provided for the sightseers, and a number of private luncheons and dinners entertained special friends. It is with reluctance that one leaves Havana. It seems to be a wonderful playground, and North Americans have joined the Cubans in making it such. Havana is not the haven for the thirsty that many people judge it to be. There is no Volstead Law, of course, but one does not see an instance of the abuse of the use of liquor.

WE bid farewell and go. Westward, like the *adelantados* and *conquistadores* of another day—

We'll find our Land O'Dreams; so away, away!
We'll find our Land O'Dreams, or at least we may,
Tomorrow or the next day or maybe the day after.

CAPITOL BUILDING, HAVANA

We shall set our course around Cape San Antonio, the most westerly point of Cuba, and through the Strait of Yucatan, past Cape Catoche where in 1517 Fernandez de Córdoba, a Spanish hidalgo, starting from the southern coast of Cuba, first discovered what is now Mexico. Driven ashore in a storm, it was here that he first found evidence of a more liberal civilization. His adventurous countrymen had encountered until now nothing but the semi-barbarism of the New World. Here instead were buildings of stone, cultivated fields, and the products of skilled artisans that indicated a superior race. Later came Juan de Grijalva, then Alvarado, and in 1519, Hernando Cortez, whose name is linked so prominently with the early history of Mexico. This same Cortez was but a frail and delicate child of seven years when Columbus made his first voyage. Later, while wasting away his time in the University of Salamanca in preparation for the law, he dreamed of adventure and finally joined the throng bound for the New World. At thirty-three we find him settled on broad estates near what is now Santiago de Cuba, married to the fair Indian maiden, Catalina Xuares, tilling the soil and working the mines, reaping no small revenue. At this time Alvarado returned with tales of his adventure, and Velásquez, the Governor, selected Hernando Cortez as captain-general of the Armada for the conquest; and conquest it was, of the great empire of Montezuma. But that is another story.

We are passing the sea track of the ships that went out on the great adventure. Twenty thousand gold ducats were spent in equipping that expedition. One can almost see the ghosts of the stately procession: caravel, bergantin, galleon,

and the great carrack, laden with the sixteen horses of the enterprise; they are all flaunting the banners of Cuba and of Charles V, of Spain, gay with the pennons of the Royal Service, bearing one hundred and ten sailors, five hundred and fifty-three soldiers, including thirty-two crossbowmen and thirteen arquebusiers, besides two hundred Indians of the Islands and an ordnance of ten heavy guns and four lighter pieces and ammunition.

THE CARIBBEAN SEA

CAPE MAISI is at the eastern tip of Cuba, and a few miles up the southern shore are Guantánamo and Santiago. In the blue waters of the Caribbean that wash these strands lies the fleet of Admiral Cervera, who bravely went out to meet our forces on July 3, 1898, knowing defeat certain. As Spain's power on the seas was born in the West Indies, so it perished in the place of its birth.

Columbus named the coast bordering the Caribbean Sea, from a region about Santa Marta in Colombia to Cape Gracias á Dios in Central America, Castillo de Oro (Castle of Gold) and Costa Rica (Rich Coast). Castillo de Oro included that part of Terra Firma, as the whole was named, now known as Colombia and Panama.

Columbus sailed into every nook and cranny of that coast on his voyages to the New World. He named Navy Bay, where Colon is now located, Nombre de Dios (Name of God), and Puerto Bello (Beautiful Port).

Puerto Bello and Cartagena were strongly fortified by the early Spaniards, for it was here that the bergantins and caravels and the great carracks laden with treasure gathered and awaited a place in the convoy of galleons or men-of-war to escort them to the mother country.

CHAPTER V

MEXICO

By William J. Mayo, M.D., F.A.C.S.

THE distance to the City of Mexico from the cities east of the Mississippi River equals that to southern California, and the time required to make the two journeys is approximately the same. While San Antonio is one hundred and fifty miles north of the Border, this is the city rather than Laredo on the Border from which one starts the journey into the country of our southern neighbor. San Antonio is a beautiful city, progressive, and up to date, with nearly 200,000 inhabitants. Its medical profession is of the best, its newspapers are of unusual strength, and its public spirit is shown strikingly in the beautiful parks that make it one of the most attractive of American cities. Remarkable architectural evidences of the old Spanish occupation are close at hand. The Alamo, of historic fame, is a well-preserved ruin of the Franciscan mission, built in 1772, in which in 1836 a group of one hundred and eighty-three Americans to the last man died at their posts when besieged for thirteen days by General Santa Anna's Mexican army. Among these gallant defenders were Colonel James Bowie, whose name is perpetuated by a remarkable hunting knife which let the light of day into much human anatomy in frontier times, and David Crockett, the bold scout, loved in our boyhood days, and characterized by his slogan, "Be sure you are right, before you blaze away," which might well face the surgeon from the wall of the surgical amphitheater.

On crossing the Rio Grande, one enters a truly foreign country and an ancient civilization. The contour of the land changes, rising gradually to the great central plateau of Mexico, in the northern part of which is situated the city of Monterey. On the line of the railroad near Monterey was fought the battle of Buena Vista, the most brilliant engage-

ment in the war with Mexico of 1845, and one of the most brilliantly fought battles in all history.

Pullman service beyond the Border is good and the journey to Mexico City is made very comfortably. The city is beautiful; it has with its suburbs 1,000,000 inhabitants, and it lies in the center of a well-watered valley more than seven thousand feet above sea level. Mexico City is to Mexico what Paris is to France, and as the capital city of the Mexican Federal District, what Washington is to the United States. Guadalajara, with about the elevation and population of Denver, is the second city in Mexico. It also lies in a valley of great richness; its climate varies only a few degrees during the entire year. The rainy season in this part of the country begins in June and ends in September, the downpour coming at about the same time each afternoon. The third city of Mexico, Puebla, is beautiful, and very attractive to tourists.

The Mexicans are our nearest neighbors on the south. We should live with them as understandingly and as peaceably as with our Canadian friends on the north, but there are many reasons why this has been difficult. Canadians and Americans are essentially the same people with the same historical Anglo-Saxon background. The Mexicans' civilization is Latin, and the basis of the population, Indian.

HISTORICAL

AS an aid in understanding the nature of these difficulties and the manner of overcoming them, historical events should be recalled. Mexico, as a state under Spanish rule, antedates the oldest settlement of the French and English in the New World. The conquest of the empire of the Aztecs in 1520 by the brave and hardy Spanish buccaneer, Cortez, followed closely the discovery of America. The vice-regal government established by Charles V, of Spain, flourished for a time and at the middle of the sixteenth century was the most important dominion of the white race west of the Atlantic. In the interval between 1520 and 1821, sixty-four Spanish viceroys, only one of whom was born in America, ruled in succession in the ancient capitol which Cortez had wrested from Montezuma. During this period three classes of people, quite distinct in character, appeared as subjects of the Mexican viceroyalty: Spaniards, Indians, and mixtures of the two.

Such was the condition of Mexican society at the beginning of the nineteenth century when the revolutionary movements in Europe gave rise to a revolution in Mexico, headed by

Miguel Hidalgo. Hidalgo, the son of a farmer, was born in 1753. He was educated and ordained for the church, serving as curate in several places. Hidalgo was intellectual, his opinions on all subjects were in advance of the period, and he was the first to conceive the idea of an independent Mexico, not a helpless dependency of deteriorating Spain. Under his leadership (1810–1811), a movement for independence, the Grito de Dolores, was started, which was not to die. Hidalgo was eventually vanquished by the royalist forces, and with his lieutenants, Allende, Aldama, and Jiminez, was executed July 31, 1811.

This ended the first period of the struggle for independence in Mexico. Hidalgo's struggle for independence was continued by José M. Morelos, who, until the age of thirty, was a muleteer. He was then made a curate, and later, like Hidalgo, became a general without taint of personal ambition. He led the independent troops from victory to victory, to be defeated by the royalists and condemned to death in 1815.

This closed the so-called second period of Mexican independence. If the revolutionary leaders who followed Morelos have not always been true to the example of his unselfish devotion to the cause, the mass of the population has never wavered in devotion to his memory. After the death of Morelos, the independent troops were headed by General Yturbide, who was able but actuated by selfish motives, and in 1822 the Treaty of Cordova, establishing the provisional independence of Mexico, was concerted by him and O'Donoju, the sixty-fourth viceroy.

Such movements, however, do not fundamentally change the character of a people. The republican system which was established on the ruins of the viceroyalty was stormier even than the government which it replaced. For about half a century after the revolution there was little progress toward the establishment of a permanent and orderly administration. In 1835, the confederacy of states was changed into a consolidated republic, of which Santa Anna was the nominal president and virtual dictator. For the next twenty years, through a series of turbulent revolutions, he was by turns chief, exile, and captive.

In the meantime, in 1836, Texas declared and successfully maintained its independence, and nine years later, in 1845, was admitted into the American union. A dispute concerning the Texas boundary brought on war with the United States, at the conclusion of which Mexico ceded to the United States the territory north of the Rio Grande. Santa Anna, who had

led the Mexican forces in the decisive struggle, was finally deposed in 1855.

In 1858, the able and patriotic Benito Juarez gained the presidency. He instituted a course of vigorous reforms, including the separation of church and state. The church party took advantage of an international dispute to intrigue with the French, and Louis Napoleon sent an army of invasion. An assembly of notables declared for an hereditary empire, and the Archduke Maximilian, of Austria, was induced to accept the crown. The struggle with the forces under Juarez continued until the hands of the United States were freed by the conclusion of its own Civil War.

When at this time President Lincoln's attention was called to the fact that the French had sent an army into Mexico under Maximilian, and he was asked what he meant to do about it under the Monroe Doctrine, he said that the situation reminded him of the story of the two deacons who had been bitter enemies for many years. One was taken very sick and his recovery was questionable. The congregation of the church was anxious that he should not die unreconciled, and finally brought the two together. They shook hands and forgave each other, but as the one was leaving the room, the sick man sat up suddenly and said: "Wait a minute. Of course, you know that if I get well this doesn't go." The United States got well from the Civil War, and disregard of the Monroe Doctrine did not go. Lincoln notified the French emperor that he must withdraw his troops, and sent an army corps to the frontier ready to emphasize this communication. The Emperor yielded and ordered the French soldiers to return to France. Maximilian soon fell, and independence under President Juarez was restored.

Juarez was succeeded in the presidency in 1876 by General Porfirio Diaz, a strong and sagacious ruler, who remained in power for thirty years. When the aged Diaz was deposed in 1911, the era of peace and prosperity ended, and ten years of turbulence followed during which there were nine presidents.

The people of Mexico today may be divided into three well-defined classes; first, the native Indians, comprising the majority of the population; second, the Spaniards born in Europe or in Mexico, the latter often called Creoles; and, third, the mestizos, or half-breeds, crosses between the other classes and the Indians, in varying degrees.

Mexico, in theory, is a democratic and federal republic, with twenty-eight states, two territories, and a federal district. In divisions it is analogous to the United States. Each

subordinate part manages its own local affairs and all are bound together according to the amended constitution of 1857. The president is chosen by electors of the people in general election. There is a congress of two bodies, the senate and the house of representatives. The dominant religion is Roman Catholic, but all other forms of faith are tolerated. The public schools are supported by the state, and the attendance law is well enforced. English is taught in all public schools. The scientific methods in education, like those in South America, are of French origin. As a matter of fact a trip through Mexico gives one much the same impression as a journey into Peru.

The Mayas, and those who lived before them, the Toltecs, had developed a wonderful civilization long before the Anglo-Saxons had emerged historically. Remnants of the Aztecs, who established themselves in Mexico during the thirteenth century, are still to be found in broken tribes of more than one hundred groups, with various dialects. The relic which gives the best testimony of the mental powers of the early people is their calendar, which was carved in 1512, and is now built into the cathedral in Mexico City. Evidences of remarkable prehistoric Indian civilization are now being found in explorations in southern Mexico and Guatemala.

POLITICAL

THE Indians today have little, and desire little. With their thatched-roof wattle huts, a few pigs and chickens, a banana tree, and a cocoanut tree they are happy and contented.

The people of the upper class in Mexico, who comprise about ten per cent of the population, are educated, prosperous, and, naturally, contented. There is not a more intelligent and courteous people in the world. They speak French as well as Spanish. Refinement is ingrained in them from their background of the culture of centuries.

The population intervening between the uneducated Indians and the cultured Mexicans, about twenty per cent, might be called the middle class, and the government of Mexico today is in the hands of the radical group of this class whose leaders are anxious to divide the great estates; and when one thinks of the many estates that run from 1,000,000 to 6,000,000 acres of the most fertile soil, of the great mines, and of the petroleum and other minerals, one may in some degree appreciate this view point.

The upper class in Mexico views the present government (1921) with an abiding hatred for attempting to break up the large estates. The many revolutions in Mexico have had their origin in the middle class. Unionized railroads and trades badly led are trying out theories which include those long popular among the radicals, who teach that destruction of the property of the rich adds to the wealth of the poor, and that leadership by the fourth-grade mind will bring on the millennium. However, the Indian has been the cannon fodder for these revolutions, and he is sick of his job. It is doubtful that another general revolution will develop, at least for some time. The armies have lived on the country, and the agricultural districts have been swept by the troops so often that there is little left to live on. Mexico, who should feed a great share of the world, is getting from the United States much of the corn and cattle with which to feed her people. All the thinking people of Mexico are turning their eyes to their neighbor to the north, hopefully but doubtfully, for they have not yet forgotten that Texas was once Mexican territory.

However, conditions in Mexico today are fairly settled. After all, the history of Mexico has been only that of other countries. Riots are not wanting in our own country. Military protection is to be found on all railroad trains in Mexico; it is needed on ours.

CHAPTER VI

BELIZE, BRITISH HONDURAS

By Edward I. Salisbury, M.D., F.A.C.S.

THE ship takes one to the quiet harbor of Belize, British Honduras. Nature, in her original estates, has pushed the thick tropical growth to the very shore, yes and into the harbor—floating islands of it.

Belize is the last stand of the famous Mosquito Coast Protectorate of Great Britain which was the cause of many years of strife with Spain, indeed one of the causes of the Seven Years' War. The treaty of peace of 1763 stipulated that Great Britain withdraw from the original coast line to Belize; but she did not. The treaty of 1783 failed and still another in 1784 only succeeded of partial fulfillment in 1786. In the treaty of 1814, Great Britain was excluded by Spain from the country, and this treaty was in force in 1821 when Central America threw off Spanish rule. By 1830, Great Britain was again controlling the Protectorate and in command of San Juan del Norte, the Atlantic terminus of the proposed Nicaraguan Canal. The Clayton-Bulwer treaty between the United States and Great Britain, as a part of its stipulation, returned the coast to the republics, and Belize became a colony.

A typical English colonial city is Belize. On the shore line we see a wonderful school for boys. This is conducted by the Jesuits whose predecessors settled there when they were expelled from the Central-American republics. Here gather the youths of those same countries for their basic work in science and the arts. Then there is the town itself with the two branches of the Belize River flowing around it, and the Government house.

It is Sunday and the shops are closed, but we pause in an open doorway and watch the decoration of a black coffin. Brass headed tacks work marvels in such exterior decorations. The

city is mourning the sudden passing of the foremost citizen, and in the afternoon they will bury him. Down the street the band is rehearsing for the event. Only a man such as he could have a great funeral. Blacksmith, tinsmith, carpenter, painter, general tinker, and great musician; a man of wisdom; the town crier is dead. They bring up the hand-drawn cart which is to serve as hearse, but we cannot follow the cortège for we must dine at Mrs. Lane's boarding house and be off for a trip up the river. At Mrs. Lane's we meet the members of the English colony, all busily engaged with the mail we have brought to them.

The trip up the Belize River is wonderful, a wealth of verdure and of bird life. Floating down the stream are great rafts of mahogany logs, chained together and passing on to Belize for shipment. Twelve miles of this is quite enough, for we return by the other branch of the river that passes out to sea beyond the city and our boat. The stiffening breeze makes the waves quite choppy, and the lady passengers grow restless and nervous and ask for cigarettes as darkness comes on and our boat is not in view. Perhaps she has gone on and left us behind; but no, as we round the point we see her lights, and another good hour passes before we reach her side.

CHAPTER VII

GUATEMALA

By Edward I. Salisbury, M.D., F.A.C.S.

WE are off and away to Guatemala at daybreak. We enter Bahia Amatique and proceed to Puerto Barrios, the Atlantic Port of Guatemala. There are really two ports; the other is Livingston, established as the gateway to a promised land about Coban, that rich interior of this great republic, which is reached via Rio Dulce, Lago Izabel, and a railway from Panzós along the Polochic River. At some time not far distant this railway may become an accomplished and thriving enterprise, opening into a country of unbounded resources.

Puerto Barrios is today the main entrepôt to Guatemala, the republic preeminent in the old Federation of Central-American states, the republic that once, as a colony of Spain, blazoned the way to liberation and self-government from the Isthmus of Tehuantepec to the Isthmus of Panama. There are those who are a bit incredulous about the future of these young republics, which have suffered from the fire and sword of internal strife and dictatorship. But there should be no doubts or fears as to the outcome, though there may be regret that they cannot profit by the bitter experiences of the older republics. They are not unlike the wayward child who, when admonished by the experienced parent as to the folly of his ways, replied: "Let me, too, learn the folly."

After three centuries in a strange bondage, under the hand of cruelty and tyranny, these peoples, a mixed race, suddenly emerged and were thrown upon the sea of democracy. Without any previous constitutional government as was enjoyed by our forefathers, without capital to finance their young ship of state, and without adequate communication, they were destined to experience bitter struggles.

We enter this, the land of the Quetzal, a bird that signifies

freedom but who frets his life away in captivity. This beautiful bird, with feathers of a glorious green and as soft as down, is emblazoned on the shield of Guatemala. In the home of Señor Don Francisco Sânchez Latour, the Guatemalan Minister to Washington, a wonderful specimen may be seen.

We take the 8:00 a.m. train on the International Railway of Central America and ascend to the high plateau where lies Guatemala City. For a long distance the jungle disputes the right of way with the railroad; then we meet the property of the United Fruit Company, with its well ordered banana plantations and miniature collecting railroads. At Quirigua there is a model colony for the employes, with a modern hospital. Coming to the valley of the Motagua, we course its flanks to the higher plains. We see many Indians in the river bed going about their work, perhaps just as their ancestors did when the Spaniards came. The country about seems virgin and we feel like pioneers as we note the paucity of travelers in the car; but it is well to remember that wherever one goes in Latin America, there, four centuries ago, a Spaniard has surely trod, and that he, when he came, found a civilization of a high order, and also the remains of one long since gone, that surpassed in magnificence the one then existent.

Somewhere, back in the dim and distant past, wandering tribes poured into these lands from the north. Down they came from the valley of the Colorado and spread out in the mountain fastness and great wilderness of this comparatively narrow region between the two oceans to begin the upward struggle toward civilization. From the darkness of savagery and the ignorance of barbarism emanated an age-long struggle toward light. They sought the secret of time and the hidden wonders of the universe, and finding there a subtle order in things, they applied it to their social organization. The constructiveness of nature led them, in flights of fancy, to build, and great events that came to pass gave their priests a desire to record. As the ages rolled up, they unfolded the mysteries of time and measure and devised a scheme of chronology and a calendar. They developed an architecture, dignified and beautiful, and recorded in hieroglyphics their history and institutions, monuments that stand today though they and their race have passed on. The Toltecs came south before the end of the seventh century, after the Mayas had carved their history in Petén and Quirigua upon monoliths that bear an almost unbroken sequence from 220 A.D. to 620 A.D. Then, in 1160 A.D., the Aztec and allied tribes appeared to dominate the scene and were still recording in remote places

EARTHQUAKE-RUINED CATHEDRAL, GUATEMALA CITY

the Spanish conquest when Alvarado invaded their domain to conquer the Cakchiquels, the Quichés, the Zutuzels and the Akahals. Contemplate the progress of the Old World during the same centuries, the great characters who were born and died, the advent of Christianity, the wars, the crusades, the long struggle in the arts and sciences. Without contact, the same progress was taking place in the New World, to be destroyed and laid waste by a succeeding civilization. Try to picture another scene here today, among the pyramids and courts and monuments of the Mayas and Aztecs, if the mission of the Spaniard had not been conquest, if his mission had been one of peace and exchange of learning, a search for new light on old problems and wisdom from other sages. Scan again the seeming virgin countryside. It is not new. A destroyer was here ere you came, the *conquistador;* and before him lives were lived in this region, builders built, bards sang, and lovers loved.

As darkness comes on, our puffing engine and the chilling air tell us that we are climbing to the high table land where rests the capital. Finally, we gain the level plain and it is nearly ten o'clock in the evening when we arrive at the station in Guatemala City and proceed to our hotel, the "Palace," but recently opened.

The first capital of Guatemala was Santiago de los Caballeros, some miles distant from the present one and on a much higher and very beautiful plateau near the foot of Volcan de Agua. It was founded by Don Pedro de Alvarado, the *conquistador*, nearly 400 years ago. Many things have happened since 1527. Europe was struggling then, as now. There

happened to be a war at that moment. When Alvarado left Mexico to conquer the Quichés, Charles V, Emperor of Spain, had come into power. His domains were extensive. Through his paternal grandfather, Maximilian I, a Hapsburg, he controlled Milan, Alsace, the Netherlands, and Austria which then extended to greater Poland and Styria, now the neighborhood of Fiume and Trieste. Through his maternal grandparents, Ferdinand and Isabella, he ruled a United Spain, Sardinia, the Sicilias, the Indies, and South America, west of Brazil.

Charles V, of Spain, had united forces with Henry VIII, of England, who was related to him by marriage, having married Catherine of Aragon, the maternal aunt of Charles V. Both Charles V and Henry VIII had been successful in a war against Francis I, of France, and the Turk in Hungary. The German army, in the hire of Charles V, had defeated Francis I in Italy and captured him. Henry joined forces with Francis, after his release, against Charles V. They were fearful of the latter's power. The German army in Milan, under the Constable of Bourbon, being unpaid, made a raid on Rome in the year in question, 1527, and pillaged it. During this same year, Henry was trying to get permission from Pope Clement VII to divorce Catherine. The "front page" would have been interested in other things in 1527 than the founding of Santiago de los Caballeros. Still in the turmoil of it all modern medicine was laying her foundations. In that year, Ambroise Paré was ten years of age, and Andreas Vesalius, thirteen. One hundred years were yet to elapse before William Harvey was to demonstrate the circulatory system. Time has made but a memory of them all, but their works remain to do them credit. Of Santiago de los Caballeros, time has left but a few mouldering rocks to tell of Don Pedro and his lovely wife, the Doña Beatriz de la Cueva, she, who on that fateful day of September 11, 1541, sought shelter from the rending quakes before the Virgin in the little church of Santiago. Gloom and darkness fell on the little valley while the earth trembled and shook, and there came a booming in the depths that moved mountains and tore asunder the walls of the crater lake on Volcan de Agua. Down the mountainsides came the onrush of waters, tearing up hills and boulders. Down the valley the torrent roared, into the city of Santiago de los Caballeros and the little church. The ruins in the valley do not tell a complete story of the fear, of the cries of the babes torn from their mothers' breasts, of the prayers of Doña Beatriz who went into the little church to pray.

The capital was rebuilt in the following year, 1542, upon another site; Antigua it is called now, but it too was destroyed by an earthquake in 1773.

It so happened in the year 1620, memorable in our annals for the landing of the Pilgrim Fathers at Plymouth, that a band of missionaries established a little church in a settlement at Cerro del Carmen, which was a little hill some few leagues distant from Antigua, to the northeast. The immediate locality was surrounded by deep *barrancos* or cañons; and since for a century and a half the coarser elements of nature had spared the church and the settlement, it was thought that these deep gorges gave protection from the frequent earthquakes of the region. Accordingly, in 1776, the year of the Declaration of American Independence, the new and present capital was built upon this site and for another century and a half continued to enjoy that protection.

Then the unseen disturber came like a thief in the night, and like Waterloo, its forces struck on a festive eve. It was Christmas, 1917. The afternoon had seen the finish of the Grand Meet at the Hippodrome, and as night followed the races, there was feasting and the dance. While the throngs were gay and swayed to the dulcet notes of the marimba, a distant and muffled rumbling sounded upon the midnight air like the roll of drums in battle. The dancing ceased, but the dancers seized their partners as though dizzy from motion; the floor seemed to move from beneath their feet. Then followed *temblores* and shakes and subterranean explosions; lights died out, buildings creaked, women screamed, and strong men were filled with fear. Crash followed quake and quake followed crash, and people ran wildly through the streets, stumbling as they went in the choking clouds of rising dust. Cries of fear and despair, mingled with the groans of the injured and dying, rose above the din of falling stone. The powerful, unseen hand of one of nature's awful forces had again touched the capital of Guatemala.

Immediately medical relief was dispatched from the Canal Zone and approached by the shorter land route from the Pacific. The writer was a member of this relief corps. Our train climbed the western range of the mighty Cordilleras that traverse the republic from northwest to southeast, and glided down onto the exceedingly fertile plateau where nestled the capital. It was just evening and the setting sun cast long purple shadows of a Sierras' trinity—Volcanoes Fuego, Agua, and Acatenango—on fields, green with young cane and brown with harvested corn. To the north were millions of coffee

trees red with ripening fruit, in the uplands wheat, and in the valley below, where flows the Motagua, was the thick tropical growth of palm and cocoanut, and large clearings of banana. There, amid luxuriant conditions and surrounded by deep *barrancos*, like the castles of old with their moats, lay in ruin a city whose vestiges showed that it had been touched by the hand of art, had felt the magic of learning, and in whose arteries had throbbed the pulse of commerce and of industry. Leveled alike were mansion and cottage, church and jail, hospital and hotel, school and monuments, leaving unsheltered the rich and the poor, the sick and the orphan. Thousands of dead were thrown from their tombs, and strong men were demoralized while the weak fled in fear.

But all is different today. The hustle and bustle of business has taken its place. New buildings are being erected, streets are repaved, and one looks in vain for the white-tented city of the refugees or the emergency hospital. The government tower, with its clock, is no longer on the plaza. I have a faint recollection of seeing it fall; but the statue of Christopher Columbus still faces the site of the old tower as though he had not lost his head in the general bedlam of 1917. He did lose his head as he jumped from his perilous position on the globe, though my witness of proof who stood or rather dodged with me, General Lee Christmas, the famous Revolutionario, has since gone to his reward. It will take many years for the city to recover its losses; its cathedrals, its ornate buildings, its monuments, its parks and paseos.

The environs of Guatemala City are beautiful, and a ride to La Reforma with its wonderful villas or in the shady lanes to Santa Clara, is convincing. The old aqueducts of Roman type, Pinula and Mixco, now destroyed in part, smack of other lands. Everywhere one goes one sees the Indian who represents nine-tenths of the population. Quaint in the characteristic attire of the different tribes, one sees them along the highways, stirring up clouds of dust as they trot along; a funny little dog-trot it is. Following the chief of the tribe, who carries his silver-headed staff or cane (the insignia of his office), and driving their laden burros, themselves oft-times carrying upon their backs enormous burdens that are swung in slings and suspended from bands across their foreheads, they trot along looking neither to the right nor to the left, undisturbed by the presence of a stranger. Local color and other qualities apprehended by the senses may be obtained by a visit to the market place. Here are congregated the Indians from the parts around displaying the wares they

INDIAN MARKET, GUATEMALA CITY

have to sell - fruits from the lowlands and highlands; vegetables and grain; stacks of hand-woven garments and cloth, gay and colorful or flat and somber, according as their use dictates; there are beautiful blankets of native wools and dyes, pottery for the household such as *tinajas* and *jarros* as well as hand-woven rope and bridles and halters with fancy decorations for use on their burros. Picturesque are the Indian women in their multicolored *envueltas* caught up at the waist with a brilliant *faja*, in their beautifully embroidered *huipil* or waist, with a *rebozo* or *manton* over their shoulders and their braided hair interwoven with deep purple ribbons lying as a wreath upon their heads an bound by a prettily designed and colorful ribbon or *cinta*.

Simple are the lives of these people and few seem to be their wants. They are like children and a feast day is an occasion for respite in a life of drudgery. It is the time of the pilgrimage to the *Cristo Negro* near Antigua, an the roads and trails are crowded with pilgrims. From the remote provinces of the country they come, from faraway Mexico, Honduras and

Salvador, always on foot with many days of weary travel dressed in their very best, their hats decorated with leaves and evergreen, necklaces of bright colored candies tied in strands of palm so as to form as it were strings of beads or garlands. They come from leagues around to the church of the Black Christ. With them they carry their food and blankets, and camp at dusk by the roadside to be off again before dawn. They bring with them their offerings of fruit and grain, and after they have heard religious services, which they must needs do from the plaza for the church is small, they celebrate according to the fashion of their ancestors - eat, drink and dance, and of course gossip, and the crowds melt away to their distant homes until another year, when they come again to give thanks for the blessings of the land.

CHAPTER VIII

SALVADOR

By Edward L. Salisbury, M.D., F.A.C.S.

IT is usual to make the trip to Salvador via the International Railway from Guatemala City to San José on the Pacific Coast and there catch a boat for Acajutla or La Libertad in Salvador. The capital is reached by rail from the former city and by road from the latter. We shall eliminate this long, round-about route and use the new road that follows an old trail over mountains and plains from Guatemala City to Santa Ana, Salvador, and if we plan our trip carefully we shall arrive in Santa Ana in time to take the morning train to the capital, San Salvador. By arrangement, Miguel, the chauffeur, and a companion with his large Peerless car, arrive at the hotel punctually at 5:30 in the evening, and immediately begin the loading of trunk, grips, bags and all for the overland trip. With a light lunch supply and a bottle or two of water, all is in readiness. Dressed in riding clothes and wearing a belt with bullet clips, Miguel diplomatically asks if we have a gun in case there are robbers on the road. We pat our hips knowingly, thinking more of these strange companions with whom we will be alone in a wilderness than of a chance robber on the way.

At 5:45 p.m. we are off and through the town, out the double boulevard of La Reforma with its rows of majestic trees and evergreen hedges cut in fantastic shapes, past the little chalets and villas, vine clad and blossoming with brilliant bougainvillæa, past the old moss-grown aqueduct from Mixco and through the barrio of Santa Clara whence the great highroad turns to the west and we strike off at right angles toward the south. It is a rough trail and nothing more, deep in dust which is kicked up in great clouds by the long train of oxen with their lumbering carts. Progress is slow on

the narrow road, but the night is preferable for travel as soon the Indians will be camped and the way will be clear and free from the blowing dust. We begin our climb to the rim of mountains that surround the plateau. Through the dusty haze, the sun is setting behind Volcan de Fuego, making the volcano truly one of fire. Night is approaching as we climb to what seems to be the very end of the road, the mountain barrier. Miguel says it is La Puerta Parada, the gate that stops the mountain; but, lo, as we approach it, the gate seems to open the very mountain. We enter and make a turn, it closes, and Guatemala City is lost to view.

The Indians are drawing up their carts along the roadside and campfires are burning brightly while they cook their evening meal. The air is chill now, and above the edge of the plain a full moon is rising in an almost cloudless sky, but we go on and on. At the edge of a town a night-guard stops us and asks if he might inquire who the Señor is and where he is going. He carefully protects his mouth and nose with a big black scarf so that he might not breathe the deadly night air or the "miasma" as he records our names and car number. Then, drawing himself up to his full height, he says: "*Esta bien!*" and lets us pass on. Onward we ride for hours in the cool of the night while afar off to the east is the shadowy form of Volcan Pacaya, standing out in the moonlight against the plain with its growth of shrub and cactus. We come now to an *arroya* and in crossing lose the faint track of the road. We go to the right, then to the left, and then back again to the right, but there is no sign to mark the way. The stars seem to go around and around and we are lost at night on a desert waste somewhere among the sierras of Central America. We wander aimlessly about, first one way and then another, but no road. Ah, but there are the stars and one of two directions will reach the road. Yes, we guessed it right, the first direction has located the trail, but which way shall we go? Oh yes, there is Orion and there the Pleiades, and between, Centaur with the Southern Cross, so we are off again over the hard sandy plain. It is long past midnight and feeling at ease now there is opportunity to doze off, but it is a fitful rest—earthquakes, robbers and wild animals disturb the slumber, and upon awakening we find we are fording a shallow but wide and rocky stream. The plain is far behind now and suddenly we enter a narrow road through a leafy solitude. On through the darkness we speed, and the hum of the motor is echoed from tree to tree. In the glare of the headlight frightened wild things dart for cover. Out from the Nubian blackness

COCOANUT PALMS

of the forest come strange noises and the fireflies glow at us like thousands of eyes.

We reach the open again; the moon is high over head and now and then we catch its glimmer on some volcanic lake. The road begins to wind around rocks and cliffs and into gorges where race noisy streams. Thick mists creep up about us and Miguel ties his kerchief over his mouth and nose and admonishes us to do the same. Poor lad, he must be tired and his driving does seem to be a bit reckless on these steep roads. We begin a long descent. It is nearly four o'clock; but now, after a breathless half hour, the bottom is reached and as we turn onto a clear road, two closely muffled men with guns step out of the shadows and halt us. They are soldiers. It is *La Frontera*, the border between Guatemala and Salvador. The baggage is ordered out for inspection. By fussing with it until the chief comes out from a little hut one may escape the trouble. The chief has asthma and his laboring chest squeaks like worn-out bellows. It is well to engage him in conversation about his malady. "*Si, señor, soy médico en viaje por el capital.*" He is tired and not anxious to be disturbed; an attack of asthma is bad enough for one night and of course he would not examine the *equipajes* of the *Señor Médico*. Like ships that pass in the night we have left him behind, and Miguel, thrilled in the atmosphere of his native land, "steps on the gas."

The banked campfires along the way are now stirred and begin to burn brightly as the peons prepare their *desayuno* and make ready to continue the journey to the market at Santa Ana with their produce. The oxen and carts and the heavily

market-laden burros are beginning to fill the roads that they might arrive at their destination in the cool hours of morning. The burros and peons scurry to one side as we pass, while the patient oxen have to be urged to clear the way. The things of the forest begin to stir, birds twitter, and cocks crow. There is a freshness in the air at this early hour, a smell of dewy earth and the fragrance of plant and flower, the sounds of the voices of spring that make the heart sing with the coming of dawn.

We are soon skirting the city of Santa Ana and Miguel lessens his speed as he picks his way over a deeply-rutted road. Nevertheless, it is still early when we reach the little plaza where the *mantilla* covered *señoras*, homeward bound from mass, are enjoying their daily gossip.

Our faithful Peerless draws up at the little railroad station at just a quarter of seven and there is ample time to have the baggage weighed and to buy a ticket for the daily train to San Salvador. At the appointed hour, though weary for lack of sleep, travel stained and hungry, we are off for the capital.

This is the land of volcanoes, and El Salvador has no less than eight or nine, many of them moderately active continually. For centuries earthquakes have been common at intervals. It was as recent as June, 1917, that San Salvador and the surrounding country suffered terrible losses from nature's "safety valves." Eruption and earthquake combined. Along the railway one may see the blackened silent waste of lava extending for miles about. Adjoining the fresh lava beds are older ones where scrub growth and even trees have taken root in an attempt to hide the unsightliness. The fresh black masses of molten appearance were not there on Corpus Christi Day in 1917. The fields about were green with cane and corn and dotted with the little thatched homes of the *campesino*. The gentry had taken themselves off to the village church for the fiesta and were wending their way homeward toward the close of day. Once out on the broad highway, they cast longing glances back upon the happy scenes of a few hours before. The bell in the modest campanile beside the tile-roofed sanctuary of God tolled the evening call to prayer, and they devoutly breathed "The Angelus" as they paused and knelt beside the road; and then, rising, they resumed their journey.

Suddenly the evening sky became overcast and dark clouds gathered. The distance echoed faint rumblings. The earth became unsteady, groaned with a churning in its depths, breathed heavily, rent its surface in the expansion, and belched

forth molten lava. The side of Volcano Salvador was torn and the issuing lava illumined the darkened sky with a scarlet glow. The quakes shook the city to its foundation and lowered its buildings, while the countryside flowed with the molten fuming mass which carried destruction of coffee plantation and farm in its wake. The people fled before the advancing stream perhaps to find their way blocked by a fresh rent that emitted suffocating fumes and heated rock. Nature, not content with its subterranean forces in wreaking destruction, opened the heavens and deluged the land. The electrical forces lighted the darkness with blinding flashes and terrible thunder cracked with a deafening roar. Some crater lakes were flooded while others disappeared. So it is that the forces of Mother Earth which regulate and maintain its equilibrium sometimes go awry; and great is the destruction to man and his works, great is the apprehension that falls on all flesh that is witness to it, terrible is the human suffering, both physical and mental, and mighty are the scars that are left in human hearts.

The volcanoes, though they have been destructive, have made El Salvador one of nature's beauty spots. A few leagues from the capital is the famous old volcanic lake, Ilopango. In years past, the Indians believed that this lake was the cause of earthquake and eruption, and to appease the gods of the *temblores* they were wont to break away portions of the natural dykes that barricaded its waters and so lower the level of this immense lake. This belief found its way to modern times, and after the eruption of 1917 it was proposed to the engineers that they should blast away nature's dam above the valley of the Jibon River. The plan was ill advised, for the use of powerful explosives released a terrible torrent that swept the beautiful valley and caused greater destruction than the eruption of the volcano.

Today, this wonderful lake of fresh water, with its ashen floor, is a favorite with the people of San Salvador, who on holidays and Sundays picnic on its shores and enjoy a bath in its cool waters. For those who enjoy the surf, there is always the black volcanic sandy beach at La Libertad, and a ride to the sea over the mountain road with its beautiful vistas of the blue Pacific lends keenness to the anticipation of the bath. The road from the city to the south passes alongside the well cultivated farms and chacras, but before it reaches Santa Tecla branches off to the west and winds slowly down to the sea amid clumps of palm, oleander, and the blue-flowered jacaranda.

A late afternoon drive to Santa Tecla, really a country suburb of San Salvador, is refreshing. Away from the din of the city, out on an open stretch of road, tree lined at intervals, with Volcano Salvador on the right and the San Jacinto range on the left, a truly beautiful panorama of the beauties of Central America is unfolded before you. The landscape is dotted with verdant farms and the villas and sitios of many of San Salvador's citizens. To their homes in these environs, at the close of day, many of the business people of the city motor to enjoy a quiet life until the dawn of the morrow bids them ride cityward to their work. The city itself is a busy one and has many worthy structures despite the destruction of nature. There are two principal plazas where the town folk are wont to promenade nightly, especially if there be a concert; and one night a week one of the plazas is reserved for roller skating which for a time has been quite *la moda*.

CHAPTER IX

NICARAGUA

By Edward I. Salisbury, M.D., F.A.C.S.

HE next country of the journey is Nicaragua, and it is reached by boat from La Libertad to Corinto, with a stop en route in the land-locked harbor of La Union on the Gulf of Fonseca, one of the most beautiful seas of the tropics. It is dotted with verdant islands which are crowned by volcanoes that are often active, emitting fire, smoke and steam. The scene is glorified by day with brilliant rainbows, and by night with sentinels of light. At the southernmost entrance to the gulf once stood Volcano Cosegüina, which between the years of 1835 and 1839 completely destroyed itself and scattered its remains far and wide over the countryside. While the immediate results were disastrous, the volcanic ash has enriched the soil, and now years after the devastation the site is a most fertile part of the country.

The Republic of Nicaragua has several important cities, Bluefields and Greytown (or San Juan del Norte) on the Atlantic coast, Corinto and San Juan del Sur on the Pacific, and León, Managua and Granada inland which are reached by rail from Corinto. On a sweltering morning after a sweltering night spent in a swimming *hamaca* at Luponi's Hotel in Corinto, the train is boarded for the capital, Managua. The railroad passes through a typical tropic jungle before it reaches the slight elevation on the southwestern shore of Lake Managua where the capital is located. At this season, one is struck by the vivid flower of the Cortez tree in full bloom. The tree has a large spread and bears brilliant yellow flowers which evidently bloom only for a brief season, for after two weeks but few remained. As the elevation above the city is reached, we pass the pretty little lakes of Asososca and Tiqualtepe with their beautiful waters of a deep crystal blue, and finally descend to the shore of Lake Managua with the Volcano

Momotombo smoking away to the northward. From points of vantage by night the most active volcano, Ometepe, may be seen illuminating the sky far to the south and east. Managua is a modern city constructed as the seat of government between the older colonial cities of León and Granada, a compromise or neutral ground as it were between the birthplaces of the two rival political factions of the country. Lake Managua would not enter into the scheme of the proposed Nicaraguan interoceanic canal unless it were to act as a feeder to Lake Nicaragua which latter lake would be traversed should the plan materialize. The proposed plan contemplates utilizing the San Juan River from San Juan del Norte, building a series of locks up to the level of Lake Nicaragua, some 110 feet, crossing a portion of the lake to an accessible point on its western shore, and cutting a canal through to the Pacific just above San Juan del Sur.

The distance from the Atlantic to the Pacific and the height of the lake were factors that led to the choosing of the Panama route, where the distance from deep water to deep water in the two oceans is only 50 miles and the lift to Gatun Lake only 85 to 87 feet. Private interests did at one time begin the construction of the interoceanic canal via the Nicaraguan route, but this was later abandoned. However, there are those who live in this region who await the day when the Canal will become a reality, and enhance the value of the properties they have acquired along the right of way. Nicaragua abounds in undeveloped mineral and agricultural wealth. North Americans in a large colony in the region of Matagalpa have developed coffee plantations and have fared well despite the ancient menace of transportation—the ox-cart. Some of these colonists have lived in this section for more than 30 years. As time is pressing, a visit to the more interesting cities of León and Granada must be reserved for another occasion when their colonial history may be reviewed.

CHAPTER X

COSTA RICA

By Edward I. Salisbury, M.D., F.A.C.S.

RUMOR has it that earthquakes and *temblores* daily shake this nethermost Central-American Republic, and that there are queer goings-on within the fiery subterranean dungeons of the Volcano Irazu which regularly spouts forth jets of smoke and steam. The trip from Nicaragua is made by boat from Corinto to Punta Arenas, and by railroad through San José, the capital, to Port Limón on the Atlantic coast. Costa Rica, like Panama, Guatemala, Mexico, Canada and the United States, boasts of a transcontinental railroad. This is a propitious time for the line has just been reopened after an interruption by earthquakes which shook to dust many buildings of the capital and in adjacent towns, especially along the railroad to the Pacific.

Upon the arrival at Punta Arenas in the heat of mid-day, the usual operation, the bane of every traveler, is begun inspection by the customs. Then as the train does not leave for the capital until morning, there is time to look into the shops of the carey artisans, the workers or smiths of the tortoise shell industry. It is here that are fashioned the high Spanish combs, the long ear pendants, the card and cigarette cases, and the many other useful and adorning articles of tortoise shell. There are thirteen plates of the proper material available from the back of the sea tortoise, and the largest of the Spanish type of comb requires a single piece from the largest of the tortoise species, hence the rarity of the coveted article.

Along the water front is the bathing beach, which to provide safety for the bathers is fenced off into a veritable pen by closely placed piling so as to prevent any of the only too numerous sharks from entering. Whilst the gay bathers frolic within the guarded area, the enviable *tiburones* hold silent watch without.

Not far away on the sandy shore is the little plaza so essential to every Latin-American town and here will be held the usual concert from dinner time until nine o'clock, when the village will retire, and the visitor along with it so as to be rested for the long trip on the morrow.

The trip to the capital, San José, is a pleasant one and the train creeps slowly over the roadbed so recently shaken by the earthquakes. Many of the districts that have suffered destruction are passed en route. By evening, San José is reached and here even greater destruction is apparent, although the more substantial buildings remain unharmed. It is a charming city situated about 3,000 feet above sea level. Its buildings are beautiful those pertaining to the government and the municipality, the Cathedral, the Colon theater and the many pretty houses in the residential districts. The parks and plazas are well kept and contain many notable works of art. There is in vogue the pleasant custom of promenading in the plazas during the concerts. The men and boys circle around the plaza in one direction and eye with sly glances the ladies and girls who pass in review in an opposite one.

Good roads connect San José with the principal cities in the upper and more temperate regions of Costa Rica, i.e., Cartago, Heredia and Alajuela, and fine bridle paths lead to Volcanoes Irazu and Poas. This little republic of Costa Rica is a real garden of paradise, so covered is it with wondrous plants and flowers. From the railroad along the Reventazón River to the Atlantic port, Limón, may be viewed some of the prettiest bits of scenery in Central America, and this may be enjoyed from comfortable chair cars on the well managed railroad. Limón is a busy port, and a principal banana shipping point of the United Fruit Company. One of the largest of this company's hospitals is located here in the colony of workers in the industry, and amid magnificent surroundings.

It is only a few hours trip across Mosquito Bay to Cristobal, Canal Zone, or Colon, Panama, as the city of the republic is called.

CHAPTER XI

COLOMBIA

By Edward I. Salisbury, M.D., F.A.C.S.

THE most ancient of all cities of the western hemisphere, Cartagena, was the largest and is today the most interesting city on the Caribbean seacoast. Protected seaward by a coral reef and landward by the fortress of San Felipe and the forts of the beautiful harbor, it could well depend in battle upon the enormous walls that enclose it on every side.

The harbor is often compared to that of Naples. La Popa, with the ancient convent surmounting it, forms the background, towering over the city. There are two entrances, Boca Chica (Little Mouth) and Boca Grande (Great Mouth), the latter being closed to obviate the necessity of fortifying it. As a ship passes through Boca Chica in her approach to the city, she is met on every side by projecting forts that stood guard in more turbulent times, when Drake, Raleigh, Hawkins, Vernon, and Pointis attempted to storm this stronghold.

One of the greatest pleasures of the trip is to wander through the land-gates of this old city and walk its narrow streets and the broad tops of its bastions, to explore its tunnels and dungeons, the while ruminating on the past. Here are the embrasures for the great cannon, there the slots through which the chains passed to lower the drawbridge across the moat to the outer enclosures; a ring here for securing the portcullis that barred the entrance to a tunnel of escape, and another there with its fetters for a prisoner.

The old house of the inquisition still contains mute evidence of an intolerant day, when the Spanish mind, warped by the cruelty of the Moor, had turned to retaliate by forcing its religion upon others. There are the rack, wheel, tongs and dungeon, just as they were the day the Mother Church put an end to the intolerance of the Spaniard. Strange that Spain

should carry her troubles, coming out of the Moor invasion, to a new land; but our Puritan did the same.

An old history of Cartagena was found in one of its bookshops. It is replete with legends and traditions of the place. It contains stories of conquest and war, of the bravery of an adventurer and the cruelty of a pirate, with quaint references to their life and ofttimes their death. Then too there are tales of love, even to the wooing of the Governor's daughter by a daring corsair. The book is worthy of translation.

Of medical lore one might mention a little story connected with the founder of Cartagena de Indias (Cartagena of the Indies), as it was called in contradistinction to Cartagena in Spain.

Cartagena was founded in 1533 by Don Pedro de Heredia. The locality had previously been visited by Bastidas, the founder of Panama, by Vespucci, and by others, but the strong resistance of the Indians prevented them from establishing a colony.

Heredia, as tradition states, was more fortunate than the rest, as he inherited from his forebears the inclination to adventure and to boldness, so that by his constancy in winning daily battles with the Indians, he vanquished them. Referring to the chronicles of his early life, to show his spirit—upon a certain night, while out bent on a gallant adventure in the narrow and divided lanes on the outskirts of his native village, he was attacked by six gentlemen. These gentlemen so badly impaired Heredia in the affray, so states the story, that he lost his nose, and afterward it was restored by surgeons who newly formed it through the medium of rhinoplasty, using the fleshy part of one of his arms. The story continues and says that now cured, but finding his once comely nose deformed and of bad color, Heredia, burning with wrath, sought out his aggressors, challenged them in unequal combat, and killed three of them. This I recite as an example of the plastic art in surgery in Spain as early as 1520.

Cartagena is a city of perhaps over thirty thousand without a water supply except the gentle rain, which for some reason is not abundant in that small tropical area. Water was selling at the rate of thirty cents for a five-gallon gasoline can filled sparingly with the precious liquid. A prominent English lady living in the city said that frequently her Sunday morning general ablution was provided by the drippings from the icebox. Water is brought from a great distance in kegs lashed to the backs of burros. Many of the lower classes obtain a species of the liquid, neither sweet nor altogether brackish, by

CITY WALL, CARTAGENA

digging holes along the beach and dipping up the water thus filtered drop by drop.

This city is one of the principal entrepôts of the country and is connected with the Magdalena River by a short line of railway.

The other great port is Puerto Colombia near the mouth of the Magdalena, but it too is connected with the river port, Barranquilla, by railroad.

Sabanilla was the ancient port to the river and sea, but time made a sand-bar that necessitated the removal of the port to deeper water. At present all that remains is the old Spanish Custom House, a landmark for the mariner (to avoid), for most maps mark the port as Sabanilla, and in recent months a schooner from Germany laden with cement and dynamite found herself high and dry on the shoals while steering for this old port.

THE MAGDALENA RIVER

THE capital of Colombia is Bogotá, and is situated on a high plateau just over the eastern range of the Andes. The principal approach to the capital is by the Magdalena River, which flows in a valley formed by the eastern and central ranges of the Andes. If memory of geography serves rightly, the Magdalena ranks fourth among the rivers of South America—the order being Amazon, Orinoco, Paraná and Magdalena. Ocean-going vessels cannot enter the river, or La Boca de Ceniza as it is called, because of a bar of silt that has formed. However, Colombia has recently passed a

bill authorizing the dredging of the mouth and river to Barranquilla. This will be a great advantage in the handling of shipping, as it can be transferred directly to and from ocean vessels and river steamers.

The trip up the Magdalena can hardly be equaled even by a sojourn on the Nile. With favorable conditions, viz., plenty of water in the river, and aboard an express boat, one should reach Bogotá in seven or eight days. The journey from Barranquilla to Bogotá is about nine hundred miles and necessitates several changes. The express boats carry the mail and are convenient in that all carriers make connection with passengers and mail. The first leg of the trip is on the *rio bajo* (lower river) to La Dorada, then comes a rail trip around the rapids to Beltrán, where a smaller boat carries one up the *rio alto* (upper river) to Girardot at the head of navigation. The night is spent at this river port and the trip continued by rail to Bogotá, a full day's travel over the Eastern Cordillera.

The river boats are similar to the old Mississippi River boats with stern paddle-wheels. They have metal rounded bottoms and draw three to four feet of water. There are usually three decks, the lower one reserved for the boilers, which are placed forward with a supply of wood, the usual fuel; midship the freight is stowed, and aft are found the engines, kitchen, and two or three pens for cattle, pigs, and chickens in lieu of a refrigerating plant. Slaughtering goes on daily on this part of the deck, as the supply of available meat is consumed. The staterooms are furnished with canvas cots, wash basins and pitchers, and electric fans. The passenger supplies his own linen and towels. The water supply to the rooms comes direct from the muddy water of the river. The drinking supply is filtered through a stone jar, and this is hardly safe for the stranger. A limited supply of carbonated water is sold at the bar, or the traveler may bring a case or two aboard.

The river express boat leaves from Barranquilla. The ship may experience considerable difficulty in forcing herself from the quiet channel into the turbulent waters of the lower river which rush out of the wide delta to meet the ocean. Once out upon its broad expanse the prow is turned toward the Southern Cross and the ascent of the Magdalena begins.

The bed of the river is quite tortuous and the channels for the boats change from day to day as the silt and sand are carried away from one section and deposited in another. Usually one full week is spent upon the lower river, but every

RIVER BOAT OF LOWER MAGDALENA

mile traveled is a revelation. The first few days carry one past mangrove swamps and marsh lands covered with impenetrable thickets and wild plantain and banana. Then the banks take definite form and the terrain spreads out into wide *sabanas* that stretch forth to meet the foothills in the far distance. Here and there are native thatched huts with adjoining garden spots safely enclosed and protected from the domestic animals by close wattled fences. Scattered out upon the plains and at the river's brim are small herds of cattle. Now and then the boat passes or stops at native villages where the populace come down to meet the express — a weekly event among the attractions of the town. Daily there are other stops at the wood supply stations, and at these times one swelters from the intense heat and is greatly

annoyed by the mosquitoes. Each night the same tortures are suffered—because of low water, navigation is dangerous, and the boat is tied up at the first convenient tree ashore as dusk comes on. Daybreak finds the boat continuing her journey in midstream where a refreshing breeze makes living more bearable.

There are always many natives of the better class taking the trip, and they are delightful companions. They have many local stories to tell of their country and keep one entertained. Some will try their knowledge of English with you, and you always feel that perhaps they are just a pace ahead of you and use better English than you do Spanish. In the evening the *tiples* and guitars are brought out, and all indulge in their folk songs and *arias* from the popular operas. The younger generation spend the early evening in games resembling very much those in vogue in our own country.

Each day brings new sights and wonders. After two or three days there is a wealth of bird life. Continually one sees great flocks of ducks, parrots, paraquets, and *garzas*. The *garza* is the heron or egret bird, and there are several distinct varieties –the black, white, gray, and even the rose-colored heron. At times there are hundreds of these birds standing on a sand-bar in the shallow water. Whenever the boat passes close to a wooded bank, there is opportunity to see many strange and beautiful birds in the trees. Occasionally, but rarely, there are monkeys, chattering and climbing from tree to tree. Or a snake will spring from the bank and strike a bird wading at the water's edge –all happening in the twinkling of an eye, the reptile capturing its prey. The chief attraction of the Magdalena is the huge alligator or crocodile that infests its waters. The question of the species is the source of continual argument among the travelers of this river, and the point of their man-eating or non man-eating tendency is thrashed out daily. Be that as it may, on one trip there was evidence of two deaths from either crocodile or alligator—the first a boatman who fell overboard, and the other a boy or young man whose head only was recovered the next day in one of the ports. The largest of these animals or reptiles appears to be twenty-five to thirty feet long and possibly three or four feet across the back. They appear in enormous numbers, and in one small group one may count as many as thirty-six.

CITY WALL AND LIGHTHOUSE, CARTAGENA

BARRANCA BERMEJA

AT the end of the first week the boat approaches Barranca Bermeja (Vermilion Bank), where the central depot of the Tropical Oil Company is located. The oil fields of this company are some miles back in the jungle along the Rio Colorado, but the storage tanks, the offices, dwellings and hospital are situated at this point on the Magdalena. The river bank here is very high, and the earth is a red clay, hence the name of the town—Vermilion Bank. The tributary river whose waters are colored by this clay is named Rio Colorado, or Red River.

At this point an occasional day may be spent on a sand bank, from which the boat is finally released by carrying the end of the cable ashore and making it fast to a tree while the other end is wound up on the capstan. After uprooting several trees, this process succeeds in drawing the boat into deeper water.

LA DORADA—UPPER MAGDALENA RIVER

ON the eighth day the boat reaches La Dorada, the end of the lower river travel. After transferring mail and baggage, the passengers are transported by a narrow-gauge railway around the rapids to Beltrán. This line of railway passes through a variety of country. For a short way to Honda it follows the river and then turns out at a sharp angle through the hills and rugged crags of a castlelike formation to the plains at the foot of the Central Cordillera. Here lies the

town of Mariquita, a shipping point from the mines of the Cauca Valley beyond. The road turns abruptly back from Mariquita to the river at Beltrán. At this point the journey is resumed on an upper river boat. The crowd on these little boats often exceeds many times the accommodations. Occasionally there are hardly enough staterooms for the lady travelers, and the men are "parked" on and under tables and benches, and upon the few cots that may be provided. A bribe of a *peso* to one of the deck boys may permit one to spend the night on deck on one of the cots, with fifty others "camping" in the neighborhood. Everyone stirs at daybreak, and one is well repaid for early rising. The boat forges ahead through rapids with the lower decks awash. The river bed becomes the floor of a rock-bound cañon, and the roar of the struggling engines echoes back from towering cliffs. This is the most picturesque part of the Magdalena. New verdure greets one upon every side, and in the lifting haze dim forests of *balsa*, *ceiba*, and *caoba* are seen covering the adjacent mountains.

As the boat steams along, the river has all the appearances of one newly discovered. Flanked alike by jutting rock and bamboo, the upper river is truly beautiful. Occasionally, far to the westward, Mt. Tolima may be seen with its snow-capped peak, strange to contemplate when it is realized that the mountain is only four degrees from the equator. As the morning wears on many *balsas*, or rafts, and *champans* are seen floating down-stream with great cargoes of pottery and produce for the native markets. Along the rocky flats near the villages the populace will be out taking their daily bath — men, women and children alike, while just at the water's edge the family laundering is in full process. Farther up-stream, Indians are in evidence, but very few of them. The men fish with nets, and some of the women wash their garments on the stones. The raiment of the men is limited. A very bright red semi-skirt about the waist is the only covering, excepting the straw hat with its brilliant red band. The Indians are quite adept in handling their *cayucos* or canoes in the swift-flowing stream, and it seems to delight them to ride the waves caused by the passing of the boat.

GIRARDOT TO BOGOTÁ

AT sundown the boat arrives at Girardot, and the passengers betake themselves to the Hotel San German, thankful to be free from boat-cabins and mess-tables. The tropical

hotel is a marvel. You pay for a bed rather than a room. Sometimes it is necessary to share one's room with traveling companions, perhaps a man and his wife from the United States. Each individual has a corner in a large *adobe* room, and each cot is screened off from the rest of the space. Beds are not in use, as they are hot; so canvas is stretched tightly on a frame to provide a resting place. On the ranches a tanned cowhide cot is quite the thing. All are furnished with mosquito nets.

In the morning the *equipajero* calls to be off for Bogotá. An *equipajero* is a sort of courier who travels up and down the river and cares for one's baggage in its many transfers. He is indispensable, and one of these men can care for a number of passengers. He hires porters at every change and guards your belongings. The transportation companies do not have a baggage department to care for trunks. This is left to the *equipajero* who is usually quite loyal to his customers.

The train leaves at eight o'clock for the climb over the mountain. It is a slow and dusty trip until midday, when the fields of banana and sugar cane are far below and luncheon is secured in a more temperate clime. The profusion of fruits at La Mesa is marvelous. This mountain stop has the advantage of receiving in its market the fruits of the tropic and temperate zones—grapes, apples, peaches, strawberries, melons, as well as oranges, bananas, mangoes, *nisperos*, *mameys*, *anonas*, and the hundred and one other delicately flavored fruits of the tropics. At Esperanza, the next stop, one experiences a delightful change in the atmosphere and vegetation. It becomes pleasantly cool, while all about are beautiful palms and shade trees. Flowers are blooming in profusion. Bougainvillæa, hibiscus, acacia and royal Poinciana are everywhere. Here many of the travelers stop to become accustomed to the change before proceeding to Bogotá, which is eighty-six hundred feet above sea level. The journey from this point is very interesting. Farms with corn and wheat, and plantations of coffee and cacao spread out in one beautiful vista. The air becomes cool and clear, and, when at last the tunnel is reached, everyone prepares for a quick change from linen or palm beach to wool, or seeks his overcoat. The minute spent in the tunnel changes everything, from clothes to temperature. Once on the farther side, the chilly blast of the *páramo* makes the stranger wish for furs, and the native instinctively ties his kerchief over his mouth and nose that he may not contract pneumonia.

The summit of the range is soon passed. This is much higher than Bogotá, and the train glides down to the great

plateau of Funza, where the capital is located. One changes trains at Facatativá, as the roads are of a different gauge, the Girardot Railway being a yard gauge and the Sabana a meter. It is only in recent years that the Girardot line was built, as previous to that time the old mule trail was used to Honda, where freight was transported to the river boats. The Sabana Railroad has been in existence for many years; in fact it was one of the first built in Colombia. When it was decided that progress in transportation meant the building of railroads, the capital was, of course, the first city that should have one. Rails, engines and equipment were dragged up the trails over the mountains to the plains, and construction proceeded from the center of the country instead of from its sea and river ports.

PLATEAU OF FUNZA

THE great plateau of Funza is most impressive to view. After the long and hot tropical trip one feels as if he were in a fairy land. As far as the eye can see are rolling plains and verdant *sabanas* reaching out to the faint rim of mountains that enclose them. Fields green with growing wheat, millet, and barley, and beautiful herds of Holstein and other cattle grazing in pastures where meandering brooks flow, make a picture of industry and contentment. To add beauty and quaintness to the scene are the little white, pink, and blue ranch-houses with tile roofs, and a surrounding wall and stately gate, all of which have a tile coping. The lanes from gate to house are edged by rows of majestic eucalyptus trees, giving a most attractive effect. The eucalyptus tree is not indigenous, but was imported many years ago from Australia.

The native population, that is the gentry, of the mountainous and plateau region is mostly Indian. They are a simple folk and have a rather comely appearance, with rounded faces of an olive hue and rosy cheeks; faces of beings upon whom it seems the strain of life has never fallen. They go about with their wool *ruana* over their shoulders, a quite contented lot. Seldom they travel, and very few of them have ever visited the falls of Tequendama, where this cataract tumbles six hundred feet (three times the distance of Niagara) from the very edge of their landscape to join the head waters of the Orinoco. These falls can truly be called one of the wonders of the world, yet to these people their existence is mere legend.

CAPITOL, BOGOTÁ

These folk are the descendants of the old Chibcha nation that was conquered by the Spanish, as were their counterpart in Peru, the Incas. The history of the discovery of this plateau and its people is extremely interesting. Almost simultaneously there arrived in these regions three expeditions, one each from the North, South, and East. The incident occurred in 1538 when Gonzalo Jiménez de Quesada appeared with one hundred infantrymen and sixty cavalrymen. Two years previous he had set out from Santa Marta, by land and the Magdalena, with eight hundred men and one hundred horses. Presently Nicolas Federmann loomed up with one hundred half-starved men. He represented a German exploitation company, the Welsers, a banking firm, and had traveled up the Orinoco and Meta rivers, having started on his long search five years before with four hundred well-armed and provisioned men. Following his arrival came an associate of Pizarro in Peru, Sebastian de Benalcazar, who left Quito after the conquering of the Incas, and was in search of another civilization said to live far to the North. Quesada evidently played the part of a diplomat and organized all the forces against the Chibchas, a nation said to have numbered a million souls. Having accomplished his end, he settled peaceably with the other *conquistadors*. To him is credited the founding of Bogotá, or Santa Fe as it was named and declared a city by Charles V in 1540. Bacatá was the name of the old Indian capital, and thus today has developed the name Bogotá, or Santa Fe de Bogotá.

BOGOTÁ

AT dusk the train reaches Bogotá and in the approach one may see the twinkling lights of the city nestled at the foot of the mountains Guadeloupe and Monserrat. The station is a modern one, with train sheds and gates—quite fitting for the capital. All is bustle and hustle in the streets, with coaches, autos, and tram cars in profusion.

The city has about 160,000 inhabitants, a great many more than industry can care for; hence there is a great percentage of pauperism. The climate is delightfully cool and pleasant during the day, but it is rather uncomfortable indoors at night, as no provision is made for heating the houses. Bogotá is noted for its beautiful buildings and churches, the cathedral being a magnificent example of the Roman type of architecture of the Spanish Renaissance. The residential district of Chapinero contains many beautiful chalets and villas, homes of the well-to-do, although not a few still retain their typical Spanish homes in the heart of the city. There are many pretty drives about the city, one in particular, Paseo Bolivar, which is located on Mts. Guadeloupe and Monserrat, and permits of a wonderful view of the city. Upon one of these peaks there is a chapel to which many people make pilgrimages. At times one experiences almost the sense of seeing an apparition. Heavy white clouds obscure the mountains so that the sky alone appears in their place. Suddenly the sun will come out, illuminating the fleecy cloud-banks on the mountains, and there suspended in mid-air will appear the little white chapel, a perfect miniature upon porcelain. The effect is startling, but lasts only a moment when it is spoiled by shifting clouds.

Bogotá held the court of the Viceroys in the pre-republic days. It was the center of the Spanish government in South America. In the Palace of San Carlos were read the declarations of the king which were law and life to the New World subjects.

ON the occasion of the *Vandyck* Cruise in 1923, time did not permit of the trip to Bogotá. One most interesting day was spent in Cartagena, where we had a drive about the city, a visit to the Governor, Señor Doctor Roman, surveyed their large municipal hospital, lunched in the out-of-door pavilion of the Club La Popa, and attended a tea dance at their seashore club, Miramar, all of which created an atmosphere that was enjoyable, interesting, and never to be forgotten.

CHAPTER XII

VENEZUELA

By Edward I. Salisbury, M.D., F.A.C.S.

NE of the ports of call for some of the steamers traveling eastward from Colombia is Puerto Cabello, a rather busy little town with a small shipyard. In the plaza near the wharf is a dignified monument erected to the officers and soldiers of the United States who aided the Bolivian States in the war of separation from Spain. It bears the shields of Venezuela and the United States, and the whole is surmounted by a golden spread eagle.

LA GUAYRA AND CARACAS

LA GUAYRA, the port of entry to Caracas, is a snug little hamlet with a small exposed harbor, and a succession of imposing shore mountains of the Sierra Nevada coast range, covered with green, which form the beach line and are the foothills of a bewildering bulwark of mountain terraces which terminate far above in snow-capped peaks.

Caracas, the capital, may be reached by train or automobile from La Guayra, a distance of about twenty-three miles. Among the mountains above the sea the train meanders around the peaks, on ledges of barren rock, through tunnels, over trestles, and there is a succession of scenes on one of the famous mountain rides of the world until the capital is reached. Caracas is nestled on a plateau just over the coast range. It has an altitude of three thousand feet, and it enjoys in the tropical belt a temperate climate. The region about Caracas in the pre-Spanish days was inhabited by Indians. Within ten or twelve leagues of this plain, it is said, were 150,000 Indians, with more than thirty *caciques*, or chiefs. These were conquered by Don Diego de Losada, and the city founded by him in 1567. Today the city numbers 100,000 inhabitants, and architecturally it is beautiful.

PATIO OF PRESIDENT'S PALACE, CARACAS

Its many public buildings are adorned by wonderful paintings by noted Venezuelan artists. Señor Manuel Segundo Sanchez, a banker by profession, but the foremost historian of Venezuela, is a true lover of his native land, and was one of the representatives of his country at the presentation and unveiling of the equestrian statue of Bolivar in Central Park, New York City, in April, 1921. He possesses a delightful personality and a brilliant mind, and it was indeed a pleasure to visit with him the birthplace of the great Simon Bolivar, which is being restored by the nation. Señor Tito Salas is depicting on canvas the life of the great liberator and general. In 1922, Salas was painting the founder of Caracas, Don Diego de Losada, in the full uniform and helmet of the *conquistador*. The artist was using the face of the distinguished Señor Sanchez as a model for this painting. In the Pantheon are the remains of Bolivar, returned to his native city from Santa Marta, Colombia, the place of his death. Over the tomb is a beautiful monument of marble, with a standing figure of Bolivar—all of which is the work of the sculptor, Tenerani. The Pantheon immortalizes many other patriots and statesmen and cherishes tombs or tablets in their honor.

THE *VANDYCK* CRUISE

LABORIOUSLY and slowly the landing at La Guayra was made in 1923 by passengers of the S. S. *Vandyck* in the

ship's boats, aided by a small coast tender loaned in the emergency.

On arriving at the capital, the members of the *Vandyck* Cruise were whisked to the official residence of the President of Venezuela, General Juan Vincente Gómez, where they were received by him and his entire cabinet, including the wives of the President and his officials. The reception room was on one side of a beautiful patio and was an imposing hall of about seventy-five by fifty feet, with a high ceiling. The carved walls were decorated with portraits of ex-presidents and generals of the republic, almost all of them in military dress. The President, a strong man with a military bearing, and several of his cabinet officers, were in khaki uniforms. Military guards were all about the palace; and with the uniforms, the bright colors of the decorations, and the ladies' dresses, the entire scene was of unusual impressiveness. The President is an animated individual, and entered into the spirit of hospitality. He was ever ready to accommodate the ubiquitous photographers and posed for many pictures.

After the reception our party divided and the men and women lunched at separate hotels. Later the surgeons visited the hospitals, inspected the well-equipped laboratory of tropical medicine and other governmental institutions, and in all too short a time the train glided down the scenic railroad to the *Vandyck* in the blue waters of the bay three thousand feet below.

OUTSKIRTS OF CARACAS

STREET SCENE, CARACAS

A committee of the Fellows of the College, headed by Dr. Luis Razetti, remained with us during the day and until we waved them adieu at twilight on the little landing in La Guayra.

CHAPTER XIII

ISTHMUS OF PANAMA

IN OUR dream days of age we love to think of the tropical isle of Robinson Crusoe and to dwell in imagination on some far off land of the South Seas. Thus we have visualized (without thought of food or raiment) warmth and sunshine, a jungle of tropical green, and the bloom of unknown flowers; and we have traversed, far from the rule of man, the white sands of an unending sea.

Many of us have memories of these old dreams vivified for the first time as we approach and explore the Republic of Panama with its romance of history, the early landing of Columbus, the surprise of the enterprising Balboa, the sport of pirates, the early adventures of the Spaniards, the struggle against pestilence and disease, the enterprise of de Lesseps, and the final triumph of sanitation and engineering in overcoming the ruthlessness of the tropics and bringing forth a princely paradise. The scene that unfolds itself before us brings back our vision of the island paradise, the low white beach, the tangle of feathery green, the stately palm, the banana tree, the riot of color, the brilliant sunrise, the glassy sea, and the luxury of the balmy atmosphere.

But the illusion soon fades as we approach the marvelous steel and white concrete docks and their machinery of civilization. Here we find commingled our dream of a tropical island and the useful things of a world's commerce. Here the primitive overgrowth of the tropics vies unsuccessfully with man's ambition and civilization's efficiency, and the result is one that stirs the heart of the most stolid man or woman.

It is a competition between the luxurious growth of the tropics, enervating heat, torrential floods, disease-bearing insects, and over-production of animal life with civilization's machinery, sanitary regulations which limit undesirable growth, and an artificial climate produced by refrigerating devices.

VIEW FROM TIVOLI HOTEL

Here, after nearly five centuries of disease and pestilence in which human life was possible but never safe, has been builded a little kingdom that is already recognized as a health paradise on earth. It required a force as relentless as the forces of the tropics itself, a force dominated by intelligence, to succeed over almost overwhelming odds.

The vision and the hopes of the engineers and of the sanitarians were presented to a man of action, a President of the United States, one not afraid to assume responsibilities. He said, "Yes," and the work was begun. The engineers said it would require a certain number of years to finish their task of digging the canal and that it would cost $375,000,000. The work was completed more than a year in advance of the time limit and cost $9,000,000 less than was estimated.

Two outstanding things made this possible: First (and I mention this first because it was paramount), the work of the sanitarians under the direction of William Crawford Gorgas, work carried out on a plan that was not an experiment, because the same sanitarian had already proved the theory of the fundamentals on which his plan was based in his successful work in Cuba; second, absolute arbitrary power bestowed upon the Chairman of the Commission of Construction – George W. Goethals.

Perfect sanitation immediately transformed the Canal Zone into a health resort and the benevolent sanitarian who contained within himself the ability to comprehend the funda-

ADMINISTRATION BUILDING, CANAL ZONE

mental and detailed requirements of his job, to command men, and to establish a habit of efficiency among his army of helpers accomplished the stupendous task, and one of the wonders of the world was completed.

And now it is finished! We have looked admiringly upon the little kingdom of Monte Carlo with its natural beauty, its artistic architecture, its palaces of play and state, a plaything among the countries of the world. But it becomes insignificant beside the state of Panama. These two little territories are the antithesis of each other in their uses; but in their beauty, in their government, in their extent of territory, and in their wholesomeness they are similar. Each is governed by an autocrat whose word is law and between whom and his people there is no appeal. For the Zone at Panama through which pass the ships of the seas is under the jurisdiction of a governor whose arbitrary rule is absolute.

And is there not a satisfaction in knowing that efficiency still prevails and that politics, even twelve years after the real task has been finished, has not dared to break the charm, and that worthwhile and disinterested methods still prevail! One has no difficulty in recognizing that efficiency has become a habit. The great machine itself is managed by an army of contented and proud people who are spurred on by the fact that they are a part of one of the greatest mechanisms that man has perfected.

In the towers that command a view of the respective locks and of the canal site there are actual models of the entire system which duplicate in miniature the action of all of the locks. The operator and his assistants who are stationed in these towers open and close the great gates by means of electric keys as the ships enter and leave, and by the duplicating work of the models before them they verify their outlook and judge as to the accuracy of their every movement. Within these towers with their autocratic operators are confined power, accuracy, and comprehensiveness, and all movements of ships traversing the canal are controlled and directed from the towers.

And the governor of this fortunate land has built a little kingdom which honors and controls the people within his domain. All is dignified and in perfect harmony with competing nature, which covers every roof with moss and every crevice with a vine. This harmony is maintained in the warehouses on either coast; the palatial repair docks where ships from every country are hospitably welcomed; the bungalows with their screened in porches and their red-tiled roofs for the comfort of the official and of the working mechanics, the administration palace on its point of vantage with its garden approach; the barracks with graceful lawns between the artistic buildings; the broad parade grounds and extensive recreation facilities for golf, tennis, bathing, boating, and motoring, the concrete roads and boulevards running to all points of vantage; and the system of hospitals that are the pride of every American physician who visits the Canal Zone.

The United States government has absolute jurisdiction over sanitation, not only in the Canal Zone but also in the adjacent cities of Colon and Panama. The surveillance is just as carefully maintained at present as it was under General Gorgas in the days of construction. Colonel Henry Clay Fisher was until recently the Chief Sanitary Officer of the Canal Zone. He is one of General Gorgas' old lieutenants who has the habit of efficiency which is so essential and so much a part of the Canal's success, and which made sanitation possible in a tropical country, and he kept alive all of the traditional ideals that made sanitation on the Isthmus the wonder of tropical medicine.

The Canal Zone must forever maintain a court of discipline and social custom in its official life that is in current use in the highest courts of the nations of the earth. It is to be hoped that it will maintain its present dignity and that service and not trappings of office will always prevail in the ideals of its

GATUN LOCKS

devotées. The inevitableness of the maintenance of a high personal social status lies in the fact that the Canal will be visited from time to time by the great ships of the navies of the world and the traveling people of culture of all nations. The Canal Zone will become more and more attractive to everyone when its reputation for beauty and its climatic charms are better known.

The perfection of the Canal construction has been severely tested on several occasions. In 1919 the Pacific Fleet of our navy, consisting of 175 ships including dreadnaughts, passed through the Canal from the Pacific Ocean to the Atlantic. The U. S. SS. *Mexico* and U. S. SS. *Mississippi* were 624 feet long and 97¼ feet wide, with a displacement of 32,000 tons and a draft of 31 feet. The length of the locks is 1,000 feet, the width 110 feet, and the depth 40 feet. The time required for the passage of each ship was ten hours. In 1920 when the Prince of Wales was on his way to Australia, his ship, the H. M. SS. *Renown*, having a length of 795 feet and a draft of 30 feet, made the trip without incident, and the same was true of the H. M. SS. *Hood*, length 860 feet, and draft 28½ feet, which passed through the Canal in July, 1924.

In January, 1921, and again in the winter of 1925, the Atlantic Fleet passed through the Canal to join the Pacific Fleet, and in a little more than a month it returned. These passages, supreme tests, occurred without accident or delay.

COLON AND THE CANAL

FROM the Log, 1921. In the morning our ship steamed into the harbor of Colon and we landed on the Isthmus of Panama. Earlier, small clouds on the horizon obscured the sun and the flat lands of Colon were not yet in sight. At eight o'clock the low lines of the coast appeared and the shipping of Colon came into view. War ships and commercial ships from all over the world were everywhere about. We took on the pilot, the quarantine officers, and the customs men, and slowly slid alongside one of the large, substantial, clean docks.

As we approached this gate to the great water-cut we enjoyed the same beautiful scenes we had looked upon previously the fascinating beauty of the shore line, with its projections, its islands and its bays; the wealth of billowy, feathery green of the jungle, with here and there a two-story, red-roofed, screened-in government employe's residence, a hospital or an office building, and royal palms frequently projecting above all like great feather dusters.

We did not have to wait until we reached South America to feel the warm handclasp of welcome. When we first landed at Panama, standing on the dock at Colon was our friend, and Chief Sanitary Officer of the Canal Zone, Colonel H. C. Fisher. We last knew him in the Surgeon General's office in Washington during the strenuous days of the war. He was in uniform, appearing almost boyish in his white helmet, and his face was good to look upon.

In Colon we observed "the system," which is exemplified in the well-built docks, and the loading and unloading, icing, and cooling facilities furnished alike to the ship traffic of the entire

OLD PANAMA RUINS

GAILLARD (CULEBRA) CUT

world. Shortly we took a special train for our ride across the Isthmus. Our first stop was at Gatun Locks, just to the east of Gatun Lake, which is twenty-eight feet above the Atlantic Ocean. From this vantage point we looked about and saw the great spillway that carries off the surplus water, and that also creates the electric current that furnishes light and power for the gigantic machinery of the Panama Canal; the attractive towers from which the operators control by electric buttons the seemingly intricate mechanism; the traction engine and the engineer who guides the various ships through the great locks that will accommodate any vessel, regardless of size; the emergency gates standing idle waiting for the unforeseen. However, the real charm is in the warm and balmy atmosphere, in the soft blue mist, in the little mountains which extend north and south and connect the mountain ranges of the two Americas, in the velvety sward that we walk upon, fashioned by nature from fern-like grasses and the little vine with the miniature purple daisy, in the watch-like perfection of it all, in the little villages with their red-roofed houses the white fronts of which are covered with red and purple bougainvillæa, all guarded by royal palms and buried in ever-growing tropical green. While many of the miniature mountains were cleared of growth in the construction of the Canal, a carpet of smooth green remains and extends to the water's edge.

We skirted the great lake created by the overflow and were fascinated by the dead trees on whose tops rested orchids and other parasitic growth. We disembarked from our train and went through Gaillard Cut on the little submarine chaser, the

Gold Star. The quicksand-like bottom of the Cut is being elevated continuously by the pressure from the mountain-hills on either side, and there is nothing to do but scoop out the earth with great dredges, either until there is no bottom or until the two mountains have been hauled away. After passing through the Cut we again boarded our train and went through the slip to the Pacific. Everywhere are the purple mist, cleanliness, and signs of the careful husbandman. It is here that Gorgas did his magnificent work in building an everlasting monument to the people of the tropics. As it was once the pestilence spot, it is now the health garden of the tropics.

PANAMA

FROM the Log, 1921. We passed through Balboa with its new administrative buildings of Spanish architecture and the Ancon Hospital resting on the terraced hill, and arrived at the Panama station, whence we were hustled to our hotel, the Tivoli. All we had seen on the Isthmus was beautiful when last we viewed it, but on this second occasion there was no disappointment, it was more beautiful than ever. Surely Panama must become one of the great resorts of the world.

After luncheon we drove through Balboa, out to Fort Amazon, and over the causeway which has been built from the earth taken from Gaillard Cut to the nearby islands that are so wonderfully fortified for our protection. Looking back, we saw low-lying Panama, with its attractive towers and its substantial Spanish architecture. On our return we drove through the streets of Panama. As it was the week preceding Lent the carnival, which is celebrated in all Latin-American countries at that time of the year, was in full sway. Beautiful children, and young men and women with skin of all shades, brilliantly dressed but in good taste, were here holding forth in innocent gaiety.

We saw some of our numerous friends of war time, among them Colonel Greenleaf, Sanitary Officer of Panama, and Colonel Hess, in charge of the Ancon Hospital. At a reception we met the principal members of the medical fraternity of this little Republic. We were particularly interested in the inspection of the city of Panama under the guidance of Dr. Braithwaite. We also viewed the site for the new Santo Tomas Hospital, visited other points of interest, and had luncheon with our professional friends on the broad balconies of the Union Club, which overlooks the Pacific.

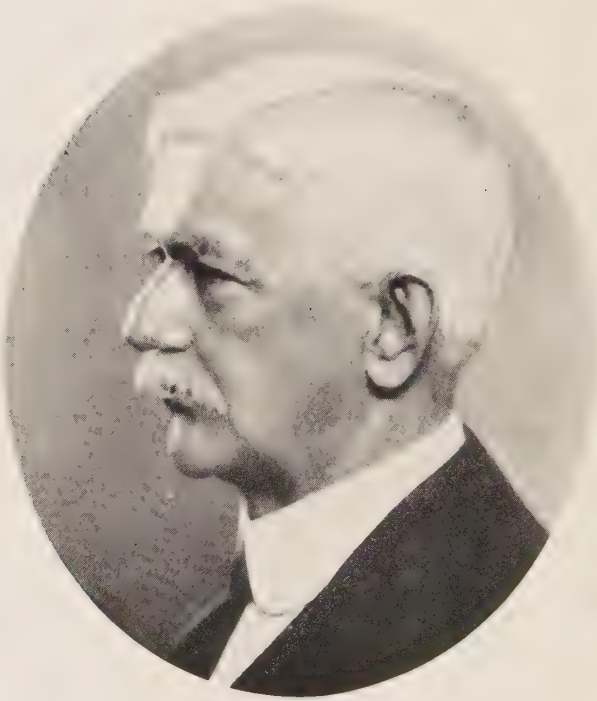
MAJOR GENERAL WILLIAM C. GORGAS, M.C., U.S.A., K.C.M.G.

IT is now well recognized that the Panama Canal could not have been completed if it had not been for the sanitary regulations that were devised and enforced in connection with the work of digging and constructing. The Medical Corps of the United States Army was responsible for this accomplishment. This Corps, through the self-sacrifice of its members, revealed the course of malaria and yellow fever, and discovered and applied the remedy. The miracle of the completion of the Panama Canal could not have been attributable to Theodore Roosevelt alone even if it had been necessary to occupy much more territory; nor to General Goethals alone even if the Culebra slides had been multiplied ten times; but to that lovable man who, with his associates of the Medical Corps of the Army, applied the rules of modern sanitation, rules based on fundamental discoveries, and administrative regulations formulated by this same great scientist, the late Major General William Crawford Gorgas.

One does not wonder that General Gorgas loved the beautiful spot that his genius made possible, and that he saw rise from a tropical jungle of pestilence to a paradise for men the destined garden spot of the world.

Once while General Gorgas and the writer were waiting for an interview in the office of the Secretary of War, we spoke of the horrors of the war in which we were both so busily engaged. I remarked to the General that it must seem to him that fate had pursued him pretty closely; after all the work he had done in sanitation to be suddenly called upon to raise an army of civilian doctors for the greatest war of history. "Yes," he said, "I wish the horrible war were over." I said, "What is the very first thing that you would do, General Gorgas, if tomorrow morning, before arising, you should receive a telephone message assuring you that the war was ended?" "Do you know what I would do?" he asked, while his eyes had a far-away, wistful expression. "I would ring off, call New York City, and order a passage for South America. I would go to Guayaquil, Ecuador, the only place in which yellow fever is prevalent, exterminate the pestilence, and then and then return to Panama, the garden spot of the world, and end my days writing an elegy on yellow fever."

And this was not the mere day-dreaming of a man overwhelmed by a stupendous job, but the real yearning of a peace-loving man, who, within a month after the armistice, accepted a commission from the Rockefeller Foundation to



MAJOR GENERAL WILLIAM C. GORGAS, M.C., U.S.A.
K.C.M.G.

go to Guayaquil, Ecuador, to do the very job that he wished to do.

While Dr. Mayo and I were visiting the President of the Republic of Peru, he spoke affectionately of General Gorgas and said that three of the South-American Republics Peru, Ecuador, and I believe Colombia—had appointed General Gorgas the official Inspector-General of Sanitation for the western coast. Unfortunately, we missed General Gorgas at Panama, as he was on his way south and we had passed each other en route without realizing it. General Gorgas died on July 4, 1920.

PRESIDENT BELISARIO PORRAS—GORGAS MEMORIAL

FROM the Log, 1921. By appointment, I called on Señor Belisario Porras, President of the Republic of Panama. The purpose of my interview with the President was to discuss the proposed memorial to General Gorgas, a memorial that will be an object lesson to the people of the future; that will typify that great man's character; and that will carry on the work that his genius organized and that his industry so successfully administered.

Señor Porras is sympathetic to and took the initiative in a plan that will establish in Panama a memorial to General Gorgas; not a bronze or marble statue, but a great laboratory in which will be conducted a research in tropical diseases; a working place that will attract the distinguished research workers of the world; a school that will disseminate to the practitioners of medicine from all countries the knowledge that is required by them to prevent and cure disease.

In this country the plans, expanded to include a health educational movement, are being developed by the Gorgas Memorial Institute of Tropical and Preventive Medicine, Incorporated, with the following personnel:

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THE *VANDYCK* CRUISE

FROM the Log, 1923. Our friends of old were on the dock at Colon to meet us, to greet us, and to guide us. Our *Vandyck* Cruise party proceeded by relays of railroad and ship across the Isthmus to Balboa and Panama, and inspected the Canal on the way. At Panama a program had been planned which had for its principal feature the laying of the corner-stone of the Gorgas Memorial Institute of Tropical and Preventive Medicine. As the acting president of the Gorgas Memorial Institute I had received a marconigram the day before requesting me to respond to the address to be delivered on this occasion by President Porras. On the beautiful site presented to the Gorgas Memorial Institute by the Republic of Panama, an open pavilion had been erected to accommodate the speakers, the Governmental officials, and the distinguished guests. An audience of many hundreds had assembled, and on our arrival we proceeded to the pavilion through a narrow lane that was kept open by soldiers. A large band enlivened the scene with its music. An address* was made by President Porras, whose delivery was that of a trained, impassioned orator, and he was received with great enthusiasm. He was followed by Dr. Augusto S. Boyd, who delivered an address of welcome to the English-speaking strangers*; and a short response by myself *. President Porras then, assisted by the other members of his committee and the writer, secured with trowel and mortar an appropriate tablet on the site of the future home of the Gorgas Memorial Institute. It was an inspiring occasion. At our right as we spoke was an heroic plaster bust of General Gorgas; and its life-like features, with the genial smile playing about its face, encouraged us who loved him to believe that he was there in spirit to lend approbation to our action.

The site selected for carrying on the work of Gorgas is located on a point of land which projects into the Bay of

* Surg., Gynec. & Obst., 1923, xxxvi, 727–730.

LAYING OF CORNER-STONE, GORGAS MEMORIAL

Panama, the old exposition grounds, and commands a view of the heights of Balboa, Ancon Hospital, and the far-away hills and mountains bordering the Canal; it lies in close proximity to the new Santo Tomas Hospital, and to the statue of Vasco Nuñez de Balboa who looks out over the Pacific Ocean which he discovered over four hundred years ago.

In the evening President Porras gave a formal reception at the Executive Mansion to which all members of our party were invited, as well as the society of Panama and the Canal Zone. It was a brilliant affair, combining cordiality of the highest type and an oriental display of hospitality that is seldom seen in these days of somber lights.

During the reception, an Honorary Fellowship in the College was conferred on Dr. Augusto S. Boyd, a distinguished surgeon of Panama, by the officials of the American College of Surgeons.

President Porras is not only a beloved executive and a man of strong personality and culture, but he has within him the power to impart enthusiasm to his associates and the

quality the Spaniards express as *simpatico*. It may be said, without danger of refutation, that he succeeded in making a friend of every member of our Cruise party who visited Panama; and the ladies are still inquiring when we shall go back to beautiful Panama and to their friend, Belisario Porras.

OLD PANAMA

CHAPTER XIV

SOUTH OF PANAMA—1920

E LEFT Panama in the evening and were southward bound in the Pacific off the shores of South America. A feeling of contentment comes from the freedom of cares, the comfort of one's surroundings, and the anticipation of many warm days with spicy breezes and the lull of the ocean, the latter seeping deeper and deeper into one's blood. When we were three degrees from the Equator we experienced one of our most comfortable days. It was warm but not hot, with a cool breeze that was invigorating. In the evening we sat upon the deck and studied the strange skies in an endeavor to become acquainted with the new map which was replacing the old as we proceeded southward.

During the day we lazily whiled away the hours with reading, not too strenuously pursued, in looking at the deep blue moving waters, just dreaming, or rejoicing in our situation and comfort.

In a clear, yellow sky we watched a very large, red sun slowly sink into the purple waters. First its lower rim was dipped, gradually it descended, and finally after one last peep of its upper edge it was off to China. Then a momentary glow, quick darkness and the bugle call to dinner.

In the cheerful dining salon an orchestra was playing unobtrusive music. Our little group of six was happy and carefree, with appetites for a good dinner and the cheer of the light Chilean wine to which Comrade Winn had introduced us. Then the long evening conversationing on deck (this being Sunday, no bridge), near gossip, and sheer nonsense which keeps the unstrained nerves unstrained.

We were planning an Equator party for the following evening. Our Northern dear ones were to be invited, transported by magic, and given an evening with us in our floating palace, to demonstrate to them the charm of the tropical seas, and

FATHER NEPTUNE HOLDS COURT

introduce them to Father Neptune, the host; and in the wee, small hours of the morning, after they had accepted of our hospitality and viewed the Southern Cross, those who would choose not to remain with us were to be sent back to the frosty cold winds and the horrible steam heat of the north.

Equator Day. Clouds obscured the sun and a brisk breeze came from the southwest. The temperature was from 70° F. to 80°, and it was delightful on deck for loafing, reading, playing, or reflecting.

At noon the whistle blew and we all rushed to the rail to see the Equator. The evening before the Captain had announced that the next day at four o'clock Father Neptune would hold court on the forward deck; that all who had not been initiated should be prepared to join the guild.

Father Neptune Holds Court. Accordingly at four o'clock a band was heard. Fife and drum were leading a procession in which were Father Neptune, with long flowing robes, hair and whiskers; his wife, a beauty with masculine beard; the doctor and barber, appropriately garbed and carrying necessary implements of their professions; and a following of big, stout

athletes who were delegated to subdue the obstinate. The ceremony took place at the side of a large swimming tank of sea water in which sported half a dozen athletes in bathing suits, waiting to duck their victims.

A number of our passengers, men and women, were put through the following paces: Formal introduction to Father Neptune and his lady; examination by the doctor with stethoscope, thermometer, and tooth forceps about ten times the normal size; administration of varicolored medicines; appliance of lather (flour and water paste) by the barber and an attempt to shave with a four foot razor. During the latter procedure the victim was seated with his back to the swimming tank and at the opportune moment was pushed back into it by the attendants. The last fellow who was brought on continued his struggles until all of the members of the Neptune party were in the tank, with the paraphernalia of their high offices scattered about them.

It was interesting; but it was rough play and ruthless. He who resisted was destined to hard usage. In the evening all who were present at the function received their diplomas, certifying that they had become members of the great Neptune family and were privileged to cross the Equator at any future time without molestation.

PERUVIAN COAST, SOUTH OF MOLLENDO

Fancy Dress Ball. In the evening we had a fancy dress ball, followed by a dance. We young folks enjoyed it much while the middle aged and older ones looked on with tolerance.

No day could have been more perfect than our Equator Day—that day that we had been dreading for months. The only disagreeable feature of this delightful loafing tour was the fact that we had to land occasionally.

CHAPTER XV

ECUADOR

By Francis P. Corrigan, M.D., F.A.C.S.

THE South American countries are regarded by the average man of North America as out of the world, and he is able to form only a misty and, in general, incorrect picture of any of them. Tour through one? Oh, dear, no. Too wild, too rough, too primitive for comfort; leave it to the explorers. Anything to see? Oh, probably not. Any culture? Never heard of it.

But the traveler whose peregrinations have led him through any of the countries of our sister continent knows how far from true are the pictures formed by the northerner. It seems as though the world could offer to the traveler no country of greater and more varied interest than Ecuador, whether the traveler be a tourist who cares only for natural scenery and the picturesque scenes of quaint cities, or whether he be a scientist engaged in any study, from archæology to zoology.

Ecuador derives its name from the fact that it is crossed by the Equator. It was at one time, with Colombia and Venezuela, a member of the confederation called New Granada; but the interests of the three countries were not common and their geography did not make the union a natural one, so there was a friendly separation nearly a century ago. The topography of the country is of two distinct types: Low plains skirting the Pacific on the west, and two parallel chains of mountains to the east. These two chains of the Andes, always, in Ecuador, called the Cordillera, enclose a plateau called the Altiplano (high plain). This plateau, which has an average width of sixty miles and an elevation of 7,500 to 10,000 feet, is divided in several places into minor basins around which are many of South America's highest mountains, forming scenery unexcelled in any part of the world. Around two of these basins are peaks of bewildering grandeur and awe-inspiring sublimity.

MOUNT CHIMBORAZA, ECUADOR

Fifty of the mountains exceed 10,000 feet in height; twenty-two are covered with perpetual snow; twenty volcanoes, some still showing signs of activity, are in a group of which Cotopaxi, the highest volcano in the world, with an altitude of 19,614 feet, is one.

Ecuador is entered most easily through Guayaquil, its principal port, a city of 100,000, situated on the Guayas river, about forty miles from the coast. The city lies on a river which runs through a plain with towering mountains in the distance. It is a picturesque scene which greets the eye, and there is a hint of the Orient in the views—men with broad brimmed hats propelling low, long boats, and houses built on piles to protect them from the floods which occur during the wet season. Guayaquil is a typical commercial city of the tropics, in the main constructed of light materials after the custom of the region, though the cathedral, hospitals and public buildings are of stone and of an architecture at once recognized as Spanish. The Spanish tongue is the common one of the people; but the traveler who speaks only English will have no great difficulty. The people, like all the Latins, are courteous, hospitable and accommodating.

One will hasten on from Guayaquil to the famous capital, Quito, which was described in the geography of our early days as lying on the Equator. There is an old Spanish highway from Guayaquil to Quito, but the modern traveler will take the railway, a narrow gauge road whose trains run only in the daytime and start from the station on the other side of the

MUSEUM AND LIBRARY, GUAYAQUIL

river at four o'clock in the morning. Remembering that he is in the tropics, the traveler leaves a hotel call for two porters to help him across the river with his luggage, knowing that probably one will make his appearance. The porter bears the trunk upon his shoulders to the ferry and then to the train and one of the most remarkable rides in the world begins. The railroad traverses a magnificent agricultural district and by noon reaches an altitude of 5,000 feet. The climate here is ideal throughout the year, soft and warm but with a delightful freshness in the air. Late in the afternoon the western rim of the Cordillera has been climbed and the day's journey ends at Riobamba, at an altitude of 12,500 feet.

Riobamba is a city of 12,000 surrounded by some of the highest peaks of the Andes. It lies in the latitude of the tropics, but the traveler will remember always the cold nights he spent in it. But little coal is used in Ecuador, wood being the common fuel, and buildings are not heated at the temperature to which a man of the United States is accustomed; and the thin air penetrates to the bone. The sight of the barefooted Indians, cooking their meager breakfasts over small wood fires on the plaza at daylight, is one that will bring a chill to the traveler who recalls it.

The ride of the second day, from Riobamba to Quito, is even more wonderful than that of the first. From early morning until evening the train passes among snow-capped peaks that puncture the sky. Picture follows picture, each one more grand than that which preceded.

BRIDGE ON OLD SPANISH HIGHWAY, ECUADOR

Quito may well be called the heart of Ecuador, for it is not only the capital of the republic but as well the center of its culture. It lies on the Equator, but it has an altitude of 9,000 feet, high enough to mollify the heat and not so high as to make the air uncomfortably cold after the sun has set. It is always June in Ecuador.

Quito is a city of 80,000 population and presents a solid, substantial appearance with its many buildings of stone and cement, with roofs of red tile. The architecture is of a type but little changed from the Spanish colonial, which is Spanish with the Inca influence. One finds interesting vistas down narrow streets —sixteenth century towers, arches and colonnades; half-open, solid, studded doors through which one may steal glimpses of the flowered patios within. In this environment it is easy to visualize the plumed, booted and spurred cavalier of Spanish colonial days. The public buildings and churches are notable examples of early day architecture. These ancient masterpieces bear decorations, paintings and carvings that reflect the Inca traditions, which enhances their interest and beauty.

A picturesque city, Quito, with its Indians and half breeds clad in rags of brilliant hues; with its strange shops and street scenes. The people of Quito, indeed all Ecuadoreans, have progressive tendencies, although they are reluctant to discard all of their old customs, for which the traveler is, of course, duly thankful. They have many strong and close ties to Europe, and the prosperous classes keep abreast of the Parisian styles,

so that they have the new modes of fashion in their larger cities before they have reached many parts of the United States.

Quito has its theaters in which performances are given in Spanish by traveling companies, and cinema houses are everywhere. Each city has its plaza and band and its Sunday night concerts. Cultural development has brought libraries, art galleries and local art colonies and a growth in music, the love of which is inherent in Latins. Education is abreast of modern ideas, and common schools and universities are of a character of which the people may be proud.

Travel is comfortable. A great deal of the native travel is on horse and mule back, as the roads have not yet been developed to the degree that they have been in North America and Europe. The large number of horses of fine quality is immediately noted by the traveler. Oh, yes, there are "flivvers."

The railroad which has been running into Quito for only twenty years is a fine piece of engineering and construction. The hotels throughout the country are comfortable and in Quito quite good. Within half a dozen miles of Quito, in a temperate climate, are agricultural districts, and fruits and vegetables of the temperate zone are abundant. Only a few miles farther away are raised the many fruits of the tropics, so that dining in this region is always a most agreeable ceremony.

INDEPENDENCE PLAZA AND PRESIDENT'S PALACE, QUITO

One leaves Ecuador with the memory of a thousand awe-inspiring pictures of nature in her wildest moods, and with the recollection of contacts with a fine, generous, hospitable people.

A NATIVE HABITATION, ECUADOR

CHAPTER XVI

PERU

IN 1532, just forty years after Columbus discovered America, Pizarro with 310 soldiers landed in Peru and overturned the Empire of the Incas. In 1535 he founded the city of Lima, which now has about 200,000 inhabitants. On viewing the mummified remains of the six-foot buccaneer lying in state in the Cathedral, one visions the great mental and physical force of this man who subjugated Peru in nine years, from the time of his landing to his assassination.

"Peru is a vast country, half of it unmapped and scarcely explored. Between the Andes and the Pacific lies a narrow strip of land on which there is no rainfall. It had not rained in Lima for seventeen years, but the dust and general grime are forgotten in irrigated spots containing beautiful trees and flowers. Lima is two and a half miles from the ocean, with its port at Callao eight miles away. The Humboldt Antarctic Current, flowing along the west coast, keeps the climate pleasantly cool, but condenses the moisture in the air between the coast and the Andes and thus prevents rainfall. The lack of water is painfully apparent in Peru and has much to do with sanitary failures which even the dryness cannot wholly overcome. The country is tropical; and while the air is cool in the shade, it is very oppressive on exercise or in the sun.

"The noon siesta, a custom of the country, undoubtedly is based on human needs, for it recuperates the body from the results of the heat on the tissues, especially the nerve tissues. By dividing the day into two parts, the strain of the most trying hours in the climate of Peru and other tropical countries is reduced, and what might be called a protective neurasthenia, greatly resembling the neurasthenic state seen in the United States, is developed. Certainly the siesta, a two hours' rest in bed after the noon meal with the removal of day clothing, is useful in the treatment of neurasthenia. In the high val-

leys between the mountain ranges are fertile plateaus, the home of the Incas. The Amazon River, rising in the Peruvian Andes, has a port at the city of Iquitos in Peru which harbors vessels of considerable size." (Dr. Mayo, 1920)

FROM the Log, 1920. On our first voyage on anchoring at Callao, the port for Lima, our ship was soon besieged by launches, and in one of the first was Antonio Graña, Esq., a business man of Lima, who came to pay his respects to Dr. Mayo. His launch was followed by another with a group of Lima surgeons, representing the Sociedad Peruana de Cirugía. We were informed by Drs. Aljovin, Graña, Gastañeta, Denegri, and Morales of the committee that we were to take automobiles from Callao to Lima and become the guests of the society at the Hotel Maury during our three days' stay in Lima.

Lima, originally an inland city, has, by suburban extension, practically joined hands with the sea-coast city, Callao, and by railroad, tramcars, and motor roads these two cities have become practically one, extending from the blue Pacific into the arms of the foothills of the Andes ten miles away. For three hundred years this city was the metropolis of the southern continent, and, according to a quotation, it was "the center of vice-regal court whose splendor and gaiety vied with that of royalty itself."

The eight-mile motor trip along the sea boulevard was most enjoyable, as it gave us the first shore glimpse of this rainless country. Here is the rock-bound coast, brown with age, and indented with great crevices. The dust of ages has sifted down to the base of the rocks, to be licked up by the surf of the sea. And this is but a sample of the rainless coast of this continent which extends for hundreds of miles north and south.

Our days were full, the intervals between conducting the business of our mission being crowded by hospitable attentions which were accorded to us by the surgeons of Lima and Callao, the government of Peru, and our own United States representatives residing there. Before disembarking, we were welcomed by our American Consul and the Chargé d'Affaires, representing the American Embassy, who bore invitations for us to visit the Minister of Foreign Affairs and the President of the Republic that afternoon. Dr. Guillermo Gastañeta was our host at luncheon at the Botanical Gardens, one of the residual acquirements of great value from a recent national exposition. A group of surgeons of Lima were additional guests.

TORRE TAGLE PALACE, LIMA

At four o'clock, Mr. William Walker Smith, the Chargé d'Affaires, visited us and we made official calls upon the Minister of Foreign Affairs, and afterward on the President of the Republic. The palace of the President was built by Pizarro in about 1540, and occupied by him as his official residence. While we waited we were shown the spot where Pizarro was assassinated, and were then conducted by relays of red-coated officials to the executive apartments. There we were met by the secretary, who took us into the audience chamber where the President, Señor Augusto B. Leguia, greeted us. He is an attractive, vivacious man of rather small stature who speaks English perfectly, and we were soon engaged in an animated discussion of our mutual friend, William Crawford Gorgas. The President reminded me of our own ex-Secretary of War, Mr. Baker—the same keen, intellectual type of man.

That evening Dr. Juvenal Denegri, president of the surgical society, gave an official dinner that was attended by about sixty men and women. This was an elaborate banquet given at the Botanical Gardens, and it was an affair that emphasized the exquisite taste of these delightful people. An address directed to the President of the College, Dr. Mayo, was read by Dr. Denegri. Dr. Mayo formally responded. This occasion added to the cordiality of our reception and stamped it as

official. In this evening group we met the women, the wives and daughters of our hosts. They are vivacious, cultured, and deeply interested in the problems of our country. They are women of beauty and are thoroughly cosmopolitan. They love music and art, and usually speak French and not infrequently English. The women who accompanied us admired their French-model gowns.

The next day we, together with the ladies of our party, were entertained by Professor Miguel C. Aljovin at a luncheon at his home, the first luncheon in which an attempt was made to give us Peruvian dishes exclusively. The Peruvian cooking appeals to those whose palates crave highly seasoned and spicy sauces. At this time we were served many varieties of strange dishes for which we could have cultivated a genuine liking in a short space of time. The dining room opened onto a patio filled with flowers, growing palms, and cages of highly-colored birds who vied with a mandolin orchestra which was playing Peruvian airs. Here we succeeded in getting the home atmosphere of the people of Lima.

The following day Dr. Denegri entertained us at luncheon at the National Club, and in the evening we were the guests of Antonio Graña, Esq., at a dinner at his interesting residence. In the afternoon we attended a garden party at the American Embassy, given by Mr. and Mrs. William Walker Smith. There are many memories that will frequently hark back to our visit in Lima. The unobtrusive but continuous hospitality of these people, with their cosmopolitan ways and cultivated minds, is something that we can never forget. Our welcome was not by any means wholly official, as there was much that was personal, because of the affection that many Peruvians have for our chief, Dr. Mayo. Not until we had been deposited on our ship, loaded with fruits and other dainties, and our adieus had been said, did we realize to the full the friendships that we had made.

ONE year later we returned to Lima and were then the guests of our friend, Dr. Juvenal Denegri, at his home in beautiful La Punta, a summer suburb of Callao and Lima.

A luncheon was given for us at La Punta on the afternoon of the first day of our visit, and the same evening we were the guests of the Sociedad Peruana de Cirugía at a banquet held in the Botanical Gardens of Lima.

We were kept very busy exploring this romantic city, which was the center for the Spanish adventurers who conquered Peru and destroyed an ancient civilization. We visited the

CATHEDRAL AND PLAZA, LIMA

Cathedral where lies the conqueror and the conquered Pizarro, the museums in which are preserved the relics of the Incas, and the buildings with their carved interiors, which are examples of the fine work of the artisans of Spanish-Colonial times, as are the paintings and tilings. The tiles were creations of both the old world and the new, but today the art is lost and cannot be duplicated even in Spain. We viewed again the mountain sentinels that surround this old city, the narrow streets, and splendid monuments; we took a sea drive along the rugged coast, and listened to the cheer of children; we admired the stolidity of the Indian police, absorbed the atmosphere, and enjoyed the charming friendship of the interesting people. In two days we endeavored to accomplish the impossible gain an impression of Peru's historical and physical charm.

While modernizing influences have been somewhat slow in coming to this secluded country of the western coast, now, with many of its resources ready for more full development, and with transportation open through the Panama Canal, a great speeding up of this country's progress is occurring.

SEÑOR JAVIER PRADO

IN 1920 and again in 1921 we were afforded the pleasure of visiting Señor Prado (who died later in 1921) at his palatial home, with its private museum containing antiquities of the ancient Peruvians and of the Incas. Señor Prado was a son of a distinguished Peruvian who was President of the Republic at the time of the last war between Peru and Chile. He had gathered one of the most complete collections of ancient Peruvian pottery in existence. Many rooms of his home were filled with unusually beautiful cocobolo and mahogany carvings; his art gallery contained some of the finest works of Peruvian painters; he had collected from France and Italy excellent bronzes, marbles, miniatures, cameos, and fans. One of the sleeping rooms was a marvel with carved furniture and cabinets of native cocobolo and mahogany, while the polished floors were covered with some of the most perfect Vicuña rugs that we saw in South America. From the windows one viewed the patios, which were a particularly artistic feature of the palace, situated in a country where tropical gardens of great beauty are seen everywhere. An interesting room was one which contained many busts and the family portraits, a number of which were likenesses of his illustrious father in the gorgeous uniforms of his time with many decorations. Señor Prado was a most charming host, and extremely modest in exhibiting his treasures. One of the marvels of his collection was a room filled with the skulls of Inca chiefs, many of them having been distorted and reduced by a cunningly devised pressure apparatus used by these aborigines.

Following our visit, Dr. Ricardo Palma, who also has a remarkable collection of curios, presented to Dr. Mayo and me two Inca skulls, mementos that we shall prize forever as a reminder of our visit to Lima.

The new museum of San Marcos University, named for its founder, Señor Javier Prado, is carrying on studies and investigations destined to enlighten us on the history of the Incas and Tiahuanacos, and the aboriginal tribes, the Chimus and Nascas, of which many monoliths remain.

SEÑOR RICARDO PALMA

THE father of Dr. Palma, Señor Ricardo Palma (deceased), at one time President of the Peruvian Republic, was the author of "Tradiciones Peruanas" (Peruvian Traditions), some of which have been translated into English by Peter H.

MOLLENDO, PERU

Goldsmith, Director of the Interamerican Division of the American Association of International Conciliation. Señor Palma assembled the nucleus of the thousands of volumes which make up the present public library in Lima, to replace the earlier library which was entirely destroyed during one of the recent wars.

Señor Palma was beloved by the people of Peru, and because of his great beneficent deeds, a monument was erected to his memory and unveiled on February 12, 1921, the day we arrived in Lima on our second trip.

THE BULLFIGHT

IN commenting on the bullfight which we witnessed in 1920, Dr. Mayo said: "The bullfight still flourishes in the old ring at Lima, built nearly 200 years ago, but it is not very popular and will soon be abolished. Several surgeons in Lima told me that they had never seen a bullfight. The bullfight has its points of interest to those interested in comparative anatomy, and it requires skill and courage. It is not, however, as exciting nor as dangerous to the human participants as football, but, like our North American sports, it permits the multitude a great deal of vicarious exercise on the principle

that it is much easier to allow someone else to undergo exertion than to take setting-up exercises themselves."

MOLLENDO

NOTHING can be more restful or delightful after several stirring days on land than those immediately following on a comfortable ship. On this occasion the evening was clear, with a red half-moon slowly going down and the false and real Southern Cross shining forth from among unfamiliar constellations.

On the morning of the second day a peep from the window revealed land but a mile away, marking the coast along which we were sailing. Above the brown foothills coming down to the water's edge several higher peaks were visible, among them El Misti, a volcano nineteen thousand feet high, from the crater of which one could imagine that a little smoke issued.

About ten o'clock we approached the little port of Mollendo where we dropped anchor a half mile off shore. Soon from the shore came the usual flock of little crafts bringing to us a group of ship's helpers and taking ashore the few passengers who were leaving here to go into Bolivia. Mollendo nestles on the cliffs of the rocky coast, the surf dashing high on the rocks or curling away up on a slanting beach. The town contains a series of adobe and wood buildings on several terraces and did not appear attractive under the perpendicular rays of the sun, especially as not one green thing could be observed on the brilliant and sun-baked mountain side. One of the most striking things about the ports is the myriad of guano birds that circle about in flight, almost in dense cloud formation.

CHAPTER XVII

BOLIVIA

By Francis P. Corrigan, M.D., F.A.C.S.

A PAZ, the highest capital in the world and the commercial center of its country, is the goal of the traveler to Bolivia, the republic named in honor of Simon Bolivar, the Liberator, whose glorious leadership in wars for South American freedom is familiar to every high-school boy in the United States.

Bolivia is landlocked. It was cut off from the ocean when the coastal lands were ceded to Chile at the close of the war with that country in 1881. But under the treaty Bolivia was granted the right to transport products through the surrendered territory without payment of customs duties. There are three entrances to Bolivia from the Pacific Coast: From Mollendo, a port in southern Peru; from Arica, Chile; and from Antofagasta, Chile's famous copper and nitrate shipping port. The first route is by rail from Mollendo to Lake Titicaca (whose elevation of 12,000 feet makes it the highest navigable lake in the world), across the lake by steamer, and thence by rail to La Paz. The route from Arica is entirely by rail, and the quickest. Starting from Antofagasta, the traveler crosses the famous Chilean nitrate pampas and passes borax lakes and copper mines, all interesting but devoid of beautiful views. A most satisfactory journey is made by entering at Mollendo and leaving by way of Antofagasta. By doing this the traveler will avoid doubling his tracks, and he will see a variety of Bolivian territory, industry, and life in general.

Each of these three approaches to La Paz is through an arid and uninteresting country. The casual tourist receives an erroneous impression of Bolivia, and is led to believe that it is a country of few commercial possibilities and that existence is precarious. But Bolivia is the fourth in size of the South American countries and is the richest in minerals. Its

BIRD'S-EYE VIEW OF LA PAZ, BOLIVIA, SNOW-CAPPED ILLIMANI IN DISTANCE

deposits of tungsten, platinum and tin are exceptionally large, and one of its tin mines is the world's heaviest producer. Bolivia has vast forests of hard woods, extensive grazing lands and many fertile valleys, which, according to their altitude, grow products of both the temperate and tropical zones. A great expanse of land lies in the famous basin of the Amazon and there is an abundant production of all the products for which the basin is noted.

Bolivia, like Ecuador, was a part of the ancient kingdom of the Incas, and the Spaniards, in 1548, selected the site of La Paz, at an elevation of 12,236 feet above the sea on the eastern slope of the Cordillera, for an Inca village. The city lies in the canyon on both sides of the Chuquiyapu River, a formation similar to that of the Grand Canyon, geologically but not pictorially. The site of La Paz is an awkward one, and as a result the city has a length of three miles and a maxi-

mum width of one mile. Its streets run irregularly, and many of them have decidedly steep hills. The high altitude causes a rather severe climate; but one who does not enjoy the cold air of La Paz, especially chilling at night, will find milder weather at Ollaje, not more than seven or eight miles distant, but 3,000 feet lower; and one may depart from La Paz on an uncomfortably cold morning and pick bananas in a neotropical district in the afternoon.

The 125,000 inhabitants of La Paz are progressive, and they have modernized their city in many essential features. La Paz has a university, hospitals, libraries, an alert press, theaters, and all the institutions of a social nature necessary to the advancement of the residents. There are splendid modern buildings of considerable size and many very old and beautiful specimens of Spanish colonial architecture which show the influence of Inca civilization, all of which add to the quaintness and picturesqueness of the city.

But while the Bolivians are keenly alive to the value of progress along modern lines they cling to the social customs, and in a general way to the culture, of their Spanish forbears. The merchants trade with Paris, and in the modes of fashion the women of the prosperous class in the cities are but a few weeks behind those of the French capital. At the same time,

MOUNTAIN AUTO ROAD IN BOLIVIA

the daily life of the women is lived along the old lines of Spanish conservatism, and not a great deal is seen of them in public except as they attend church or go on shopping expeditions.

Social life in general is carried on along the lines established by the Spaniards of centuries past. One has a cup of coffee and a roll in the early morning and breakfast at 11 o'clock. The formal dinner does not begin until 8:30 or 9 o'clock in the evening. The general formal entertainment is a breakfast (*almuerzo*) at 12:30 noon, at which dinner dishes are served and all of the formality of a dinner is observed.

Bolivia is in the early stage of its commercial development, and its possibilities are unlimited. Mines are being opened, coal deposits are being located and preparations made for working them; transportation facilities are being planned and construction is being financed and put under way. One of the great enterprises is a railway line from La Paz to Buenos Aires, a road running diagonally across the interior of South America. Bolivian finances, under the counsel of American experts, are stable.

By far the greater part of the population is composed of Indians and mestizos, or a mixture of Indian and Spanish

STREET MARKET PLACE IN LA PAZ

blood. A minority is of pure white, predominantly Spanish. The aboriginal language is heard on all sides and has been used in the names of many of the mountains, rivers, lakes and cities. Spanish is the official and commercial language. Travel in Bolivia is fairly comfortable. The railroads are of the English type and hotels are relatively good. A knowledge of Spanish is not absolutely necessary, as nearly every hotel has at least one employe who can speak English; but, of course, even a limited knowledge of Spanish makes progress easier.

Courtesy and hospitality are found on every side and the traveler who departs from Bolivia takes with him the recollection of pleasant experiences. The country made great progress under President Juan Bautista Saavedra, a cultured gentleman, formerly a professor in the university, who is the author of a number of authoritative works dealing with the social and political structure of the Inca régime. The field for archaeological research has been only scratched and the researches along this line have been conducted so far principally by the Bolivians themselves with their limited financial resources. The similarity of the type of civilization of the old empire of the Incas and their predecessors bears a striking resemblance to the discovery pertaining to ancient Egypt

LLAMAS IN BOLIVIA

MOUNTAIN SCENE IN BOLIVIA

under the Pharaohs. The Incas had all of the arts of which we boast, including a considerable knowledge of the sciences, medical and otherwise. The Aztec civilization in Mexico, while contemporaneous with the Inca development in South America, must not be confounded with it. There was apparently no intercourse between the two empires; the low lying, fever ridden lands of Tehuantepec, Panama and northern Colombia having evidently formed an effective barrier to intercourse. One might write at great length on the many interesting things to be found on this most interesting roof of the world, but to get a true conception of the great blossoming republic one must visit it himself and view its wonders at first hand. At times the journey may be a bit arduous, but it is well worth whatever time, money and effort may be expended.

CHAPTER XVIII

CHILE

LOOK at the map of Chile! Do you comprehend the immense possibilities of that narrow country when she carries out the plans which are now under contemplation and when her efficient people work out the dream of her engineers? Billions of tons of gold, silver, copper, and other minerals are buried in that bulwark of mountains on her eastern border. Between the mountain barrier and the Pacific Ocean lies the strip, about one hundred to three hundred miles in width, extending from the tropics on the north, through the temperate zone, and into the frigid zone on the south. The northern half of this country requires water to make its valley equal the productiveness of southern California. The mountains near at hand will yield to the machinations of her engineers, and the gold and wealth will pour into her lap. The country requires power for manufacturing, fuel for lighting, and in the southern portion facilities for heating. Her engineers have only to tap the nearby, never exhaustible supply of water from the mountains to get an abundance of power, light, and heat, and that with the utmost economy. And this is what they are doing. We shall have to watch and wait but a short time until these Yankees of the southern continent will win our admiration and applause through their accomplishment of greater wonders than those already recorded.

Speaking of Chileans as the Yankees of South America, the Chileans, with their generous sense of humor, are already facetiously reversing the compliment by calling our complacent people the Chileans of North America.

A bird's-eye view by the conventional and rapid traveler encompasses certain high lights of interest, and in that alone he can gather food for months of pleasant contemplation. I have already dwelt upon the possibilities of Chile's many undeveloped resources; but it is in its present condition that

we are most interested. The area of Chile is 289,828 square miles, and its population is approximately 3,500,000, which indicates that there are many sections which are scantily populated. It has two important cities that possess many points of interest to the North American traveler, and several seacoast towns of growing importance.

DR. MAYO'S interesting observations on Chile follow: "Santiago, the capital and largest city of Chile, is situated at an elevation of 2,000 feet on the river Mapocho in a valley surrounded by snow-capped mountains. The site of the city is unusually beautiful, and, unlike the cities farther north in Chile and Peru, it is blessed with rain. The city government is progressive and excellent. All things considered, Santiago may be said to be the most beautiful residential city on the west coast, if not in South America.

"In the latter part of the nine crowded years of Pizarro's life, he started two expeditions south of Peru, into the country called Chile. The first expedition was beaten back by the valorous Araucanian Indians. The second met somewhat better success, but the Indians were not conquered. Eventually, after more than one hundred years of ruthless warfare, an armistice was arranged which ended in an alliance. It was these brave Araucanians who gave the native strain to the Chileans.

"The troops in Chile are German trained. Before the Great War the uniforms, helmets and general equipment were German, but they have been changed to English designs. The cavalry horses are beautiful and well trained. In the navy the training and equipment have always been British.

"The long-standing boundary dispute between Chile, Peru, and Bolivia is a source of friction, and a peaceful Pan-America depends on its settlement. There are from three to four million Chileans on 2,700 miles of Pacific coast, approximating the distance from Alaska to a point opposite Mexico City. The Chilean military attitude is the index to his characteristics, that is, efficiency and self-reliance.

"Chile has the finest railroad system in South America, both for military and for civil purposes; American equipment, with Pullman cars, etc., is used. There are no lotteries or open gambling in Chile, and a strong prohibition party exists, with evidences of control of the liquor traffic.

"The Chilean people are independent and self-reliant. They are imbued with the American spirit of progress and efficient organization. At a banquet one night, wishing to honor the

MORRO ROCK

Chileans, I said, 'Chileans are the Yankees of South America!' There was no applause and I did not repeat the offense.

"Our reception in Chile was very cordial, and everything possible was done by both the government and the medical profession to give us information and opportunities to examine their educational institutions, hospitals and clinics. The medical profession in Chile stands very high in the estimation of the people, and may be said to be the most influential of the professions. The leading medical men have taken post-graduate courses abroad, and many of them are graduates of the best continental schools. The surgeons of Chile are a splendid body of men, and it was a great pleasure to see their work and to study their methods."

ARICA AND TACNA

ARICA, our first port in Chile, is guarded by the great Morro Rock, which juts out into the ocean and reaches a height of five hundred feet. From this stronghold the Peruvian cavalry drove their horses over the sheer cliff into the sea and were dashed to pieces rather than surrender to the Chileans in the war of 1880. Since that time the province has been under Chilean control, and toward it the eyes of the world are turning.

Arica was originally the seat of the provincial government, but owing to its frequent earthquakes and tidal waves, it was deemed prudent to remove the official records to a safer and more stable location. Consequently the official residence of the Intendente is at Tacna, a beautiful oasis city thirty miles inland, at an altitude of eighteen hundred feet, and with a population of some ten thousand people.

Before reaching Arica in 1920, we had been informed through our American Consul, Mr. Charles R. Cameron, that the Intendente, Mr. Edwards, presented his compliments and requested our presence at luncheon. The invitation included Dr. and Mrs. Mayo, and Dr. and Mrs. Martin. Upon arriving in port, we were met by Mr. Cameron; Mr. Clarence Elliott, the British Consul and manager of the railroad; and Dr. Romes Aravena, of Arica, who guided us from the ship to the railway station. There we found the special coach of the Intendente awaiting us. It was a huge enclosed car with seating capacity for ten or twelve people, and standing room for as many more. It was mounted on a Ford chassis with flanged wheels which traversed the railway across the desert. The journey between the two cities is one of great interest and fascination. Endless billows of sand stretch to the foot-

TRAIN, ARICA TO TACNA

hills of the deep red and purple mountains, and constantly changing mirages vary the landscape with deceptive pictures of unreal beauty.

At last, however, one comes upon reality. Masses of tropical green, flowers in profusion, tall waving palms, and among them the red roofs of a city, Tacna, which is being extended by an irrigation system that will some day make it a great farming center. At the station we were welcomed by the Intendente and drove with him to his home, where we met his wife, four of his daughters, and his son, Fernando. One might search the world to find a more charming and hospitable family. Our luncheon was most appetizing and tempting, and abounded in delicious tropical vegetables and fruits. As the young ladies all spoke English fluently, youth and gaiety reigned.

Later we had excellent music and an hour in the beautiful garden. Then Mr. Elliott took us to inspect a new hospital of which he is justly proud; to his beautiful vineyard and orchard, where we feasted upon delicious white, blue, and red grapes, peaches and figs; and then it was time for us to make our return trip.

Upon our return to Arica we were met by the Governor of that city and taken to his home, which faces the open square of the quaint town. From the balcony we watched the popu-

FLANGED FORD, ARICA TO TACNA

GRAPE ARBOR, GARDEN OF THE INTENDENTE, TACNA

lace and listened to a concert given in our honor by an excellent band. The Chilean National Anthem and the Star Spangled Banner received the enthusiastic endorsement of the audience.

As twilight fell we boarded our ship and steamed southward once more after a never-to-be-forgotten day of pleasure and enchantment.

IQUIQUE

IQUIQUE, our next stop, a busy nitrate center with a population of about twenty thousand, was most interesting. A delegation of physicians, headed by Dr. J. E. Villalon Diaz, accompanied by the clerk of the port and Dr. Germán Aliago, met us on the ship and took us ashore for an inspection of the town.

Iquique is an important center and is the abiding place of many English, Spanish, and American people who are officials in the companies controlling the business interests in the interior.

There are several clubs of importance in Iquique, including an English Club, a Spanish Club, and a general City Club. We were entertained in these and were taken for a drive about

AUTOMOBILE CLUB, ANTOFAGASTA

this city, where the streets are sprinkled by salt water from the sea, which while allaying the dust succeeds in killing all vegetation. Several little parks formed beautiful green oases. Our hosts entertained us royally, and our day with them will not soon be forgotten.

ANTOFAGASTA

IN 1920 we met several doctors of Antofagasta, among them Dr. W. F. Shaw, an American who was at that time in charge of the hospital of the copper mines at Chuquicamata, and Dr. A. Arturo Pemjean. We were shown the clean city, which is the principal nitrate port of the world, inspected a hospital, and were entertained at luncheon in a large public garden.

At nine o'clock on the morning of February 18, 1921, Dr. Francis P. Corrigan, who had preceded me to South America and had visited Ecuador and Bolivia, boarded our ship at Antofagasta with Dr. Shaw. At ten o'clock we went ashore in their launch and inspected the four-hundred-bed hospital, which is a model of cleanliness and beauty. After driving about the city we drove to the Antofagasta Automobile Club, where our American Express party had luncheon, and where we had

PACIFIC OCEAN FROM AUTOMOBILE CLUB

about eight of our local friends, whom we had met the previous year, at luncheon with us.

VALPARAISO

EARLY in the morning of Sunday, February 20, 1921, we sailed into the Naples-like Bay of Valparaiso and saw in the distance a smoky haze over the city. As the sun cleared the mist and revealed the city in the curved indentation of the sea, it became apparent to us that something unusual was happening. We heard the booms of guns and shortly discerned the faint bray of bugles and the fainter tones of smaller musical instruments. We wondered if this was a welcome to the voyagers of the obscure SS. *Ebro* on which we were approaching. If so, it was a royal welcome, because with a nearer view we perceived that the terraces of the city were crowded with people who were cheering and waving flags. However, we were soon disillusioned and made to realize that our ship was not the object of all this attention, for in the opening to the harbor stood a great black hulk which proved to be the Chilean monster war vessel, *La Torre*, that had just arrived from the shipyards of England. Close to it, flylike, were a multitude of smaller steamers, and around them still smaller launches and rowboats. The new battle-ship

stood out majestically, its rigging and decks covered with men and officers at attention for the welcome of a proud nation.

Valparaiso occupies a position on the long coast line half way between the upper and the lower limits. It has a population of approximately 200,000. It is a cosmopolitan city, having among its inhabitants 5,000 Germans, 5,000 English, with Belgians, French, Austrians, Australians, and a few from a number of the other Latin-American countries. The United States and Canada are represented by several hundred, and there is a sprinkling of Chinese and Japanese.

About four hundred years ago, in 1536, Juan de Saavedra, a Spanish officer, founded this settlement, and gave it the name of his birthplace in Spain. It passed through many vicissitudes, including several destructive earthquakes. As is true of many of the other South-American nations, a wave of independence spread over Chile, and the Spanish authorities were deposed in 1810; but it was not until 1818 that the country threw off the Spanish yoke and became a republic. Valparaiso became a flourishing city, but in 1906–7 it met the fate of San Francisco and Kingston, and was partially destroyed by earthquake and fire. It is now rebuilt, and shows but few signs of its disasters. Valparaiso lies in the southern

OXEN ON DOCK AT ANTOFAGASTA

continent in latitude similar to Buenos Aires; Cape Town, South Africa; and Sydney, Australia. It is directly south of New York, at a distance of 8,460 miles. It occupies a flat area around a symmetrical indentation of the sea, a bay nearly three miles in extent of coast line. Beyond the flat area arise steep hills, indented with ravines, and the beautiful city extends from the flat area around the bay on to the hills above, lending to the scene as one approaches the coast from the sea an impression much like that of the bay and city of Naples. The climate of this portion of Chile varies from near freezing in the winter to 85° F. in the summer.

In a bird's-eye view of this Chilean business center, one will be attracted by the steep, inclined tram-car ways which transport the population from the low town to the hills above; its splendid water supply; the naval academy with its view of the city and bay from its ideal location on the heights; the various well-equipped hospitals which will especially interest the physician; and its suburban resorts, among them Viña del Mar, with water sports and resident attractions.

Valparaiso, while a commercial city of importance, strikes one as an attractive place in which to live. It contains much of beauty, the rugged hills and white buildings forming an attractive contrast to the blue waters of the deep harbor,

VALPARAISO HARBOR

the green of the trees, and the wealth of color of the flowers in the patios and boulevards.

A delegation of old friends boarded our ship early in the morning and told us of the program for our one day's stay in Valparaiso and then left us for a little time. At one o'clock they returned and with them, in full regalia for the festive occasion of greeting the new battle-ship, was Dr. Alberto Adriasola, the Surgeon-General of the Chilean Navy. It was good to look upon his handsome face again and grasp his friendly hand.

Soon we were tucked away on the Admiral's launch and wended our way to the battle-ship, *La Torre*, where under the chaperonage of the Surgeon-General and under the conduct of the Commander, we inspected the ship from keel to conning tower. It was an inspiring sight to look down from the dizzy heights of the ship upon the hundreds of smaller craft that were there to give welcome, and off to the shore line of the curved bay and the terraced heights. The day had become more beautiful with sunshine and great fleecy clouds, and a temperature like our fresh June days of the north.

RACE TRACK, VIÑA DEL MAR

CERRO DE SANTA LUCIA

VIÑA DEL MAR—PRESIDENT ARTURO ALESSANDRI

WHEN we had fully enjoyed the great ship and had been the victims of the inevitable cameraman, we were taken ashore, and in automobiles drove through the suburbs of Valparaiso, passing along the stately avenues which were lined with handsome villas, the summer residences of the society of Chile, and on to the most wonderful of race courses, at Viña del Mar. It was a gala day at the races as a Prince of Spain was occupying the President's box, close to which were our seats. The races were beginning, and disregarding tips we placed our bets, and with the luck of the inexperienced, won.

In the promenade we met Dr. Amunátegui, of Santiago, and other friends of the previous year. While we walked with one of the charming señoras the band started to play and everyone stood at attention. It was the national air; the President had arrived. Naturally we were desirous of seeing him, and the Señora said: "You shall meet him." She took us to him and introduced the members of our party, as he stood unostentatiously under a large tree. He seemed more pleased than bored, and spoke to us in English. He, Arturo Alessandri, who at that time had been in office but a few months, was astonishing the old conservatives by his democratic ways. He insisted upon going about, apparently unattended,

SANTIAGO FROM CERRO DE SANTA LUCIA

although the Señora said he was constantly under the surveillance of secret service men. From appearances, he might on this day have been any one of a thousand well-dressed, unofficial holiday citizens instead of the chief executive of a great nation.

We received an invitation to attend the ball which was being given that evening in honor of the Prince. This was very tempting as all of the society of Chile would be present; but we were obliged to decline reluctantly.

Back to the race course we wandered and watched with interest the great crowds of people as they surged about the track and the grandstand during the race. When it was finished, they rushed again to the promenade where champagne corks popped in the restaurants and gaiety was everywhere manifested by these Latin people.

Presently our hosts took us back toward the city, and after driving about its edge we entered upon a valley road, whence we climbed to the heights above the town and finally emerged at the entrance to an attractive villa which was situated on a terrace above the drive. We walked up the steep winding path, on either side of which were flowers, shrubs and tropical trees, to Admiral Adriasola's home. Here we met his charming family—his wife, daughters, sons, and son-in-law. Our greeting was such as we had learned to expect from these

people of the south—so warm, so gracious, so friendly. This delightful family captivated us, and I have never known a father and a mother who seemed to have more to make them satisfied.

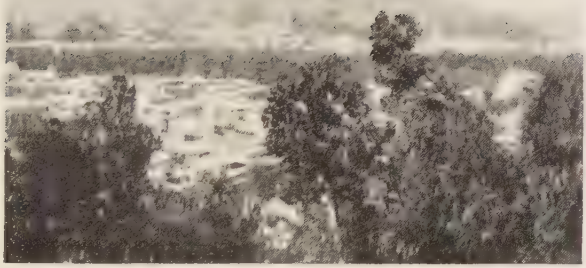
The view from the balcony of this home was most inspiring. Far below us lay a panorama of Valparaiso Bay with its mass of shipping. The entire fleets of the nations could anchor here within plain view. Indeed, only a week previous to our arrival our own Pacific Fleet was anchored in the Bay, and the charming señoritas pointed out to us where this or that favorite Yankee battleship had lain. They had sailed away within a fortnight, and who knows how many fair Chilean hearts were hidden in secret recesses of those ships?

After tea we took a last look from the upper balcony. The sun had fallen into the Pacific; a brilliant glow covered the sky and gradually faded; and as darkness came on a planet appeared, then a thousand twinkling lights, outlining the city below like sparkling jewels.

SANTIAGO

IN 1920 Dr. Mayo and I visited Santiago. We arrived in the city after midnight, and at nine o'clock the morning following, we were met at the Hotel Savoy by a committee of local

ART GALLERY, SANTIAGO



CERRO DE SAN CRISTOBAL, SANTIAGO

surgeons. Heading the delegation were Professor Gregorio Amunátegui, Dr. José Ducci, secretary of the Faculty of Medicine, Dr. Pardo Correa, Dr. Victor Koerner, Dr. Francisco Navarro, and Dr. Jermán Valenzuela. We were whisked off to an inspection of hospitals and the medical school and ended our trip at the home of Professor Amunátegui for a luncheon which was given by him and his wife for our ladies and a number of medical men, including also our Ambassador, Mr. Joseph H. Shea. This was another enjoyable luncheon of the formal type that was made unusually pleasant by its family character. Dr. Amunátegui is of the cultured type of Spanish gentleman and wins one's heart by his genial hospitality and his genuine cordiality. In the evening the members of the Faculty of Medicine and their wives gave a large dinner for us in the restaurant on the famous mountain, Cerro de Santa Lucia. This was a fitting finish for our official visit to this capital.

A Demonstration of Efficiency

FROM the Log, 1920. The pace for many days had been a fast one. On leaving the dental clinic in Santiago, Dr. Mayo, who is always considerate of his associates, intimated

that I was looking rather peaked and suggested that I return to the hotel for a little rest, as our afternoon was to be a strenuous one. This, to me, was acceptable. The officials accompanying us suggested that they utilize my incapacity to give us a demonstration of their municipal service. The city has developed a personal service organization. Any individual in distress may, in case of injury or sudden illness, call for aid from any public telephone. An immediate response is accorded in the form of an auto-ambulance with a medical attendant. We were fully two miles from the hotel. I enthusiastically consented to become the victim for the experiment. A telephone call was made, and we were asked to time the response. In less than three minutes, considerable commotion was evident in the narrow street, and with a rush an attractive, clean ambulance landed at the curb. A white-coated official conducted me to the coach and placed me upon the couch. The ambulance turned and, working continuously a three-noted siren that could be heard for blocks and which all traffic is bound to respect, started for the hotel and arrived within the prescribed time—five minutes. It was a wild ride, because it was an official demonstration, and the importance of time on this occasion seemed to be thoroughly appreciated by the attendants. However, we reached our destination without killing or maiming any people or dogs, and without catapulting any cathedrals or corner drug-stores.

The Chileans are a progressive and efficient nation, and this is obvious to the casual visitor. The Chilean Government, Army, Navy, and Municipalities all reveal thorough organization, thrift, and administrative ability of the highest order. The little demonstration referred to above was a practical illustration of their attention to detail.

The Romance of a Dental College

AN interesting diversion was a visit to La Escuela Dental, the dental department of the University of Chile, at Santiago. The Dean, Dr. Jermán Valenzuela, was our host and conducted us through a superbly equipped dental school. This institution has accommodations for three hundred students. Each student has a complete equipment, including a dental chair, instrument cabinets, instruments, supplies, and a laboratory for conducting a scientific clinic in dentistry. The building covers an entire block and is two stories in height. It is comparatively new, and splendid architecturally.

Attached to the founding of this department of the university is an interesting romance which involves the supposed

murder of a German Consul; the burning of the legation; the mysterious disappearance of the janitor of the building, and of a large sum of money belonging to the Consul's country which had been taken from the safe. A search among the ruins revealed the body of a man, much disfigured, on which were found the shirt studs, cuff-buttons, and other personal effects of the Consul. The Chilean Government was much humiliated by the atrocious murder, and proceeded to make amends for the tragedy in every possible way. The official received a magnificent burial, and the state vied with the municipality in doing honor befitting the station of the deceased and the country which he represented. During the inquest, Dr. Valenzuela, the dentist, requested the privilege of examining the jaw and teeth. He made careful notes of his findings. He discovered that the murdered man had splendid teeth without fillings or defects, and that one wisdom tooth was missing. He then consulted the wife of the Consul and learned that her husband had had defective teeth and had been the subject of considerable dental repair. The wife of the janitor stated that her husband had had perfect teeth and had consulted a dentist on but one occasion, when he had had a tooth extracted. This information, which confirmed Dr. Valenzuela's suspicion, was communicated to the proper authorities. The investigation that followed led to the capture of the official who had become snow-bound in the Andes in his attempt to escape with his bags of gold. He was brought back to Santiago, tried for the murder of the janitor and treachery to his government, and finally executed. In the meantime, the janitor had received a state funeral. He had been buried with great honor, and his remains placed in a mausoleum, as befitted the rank of an honored official of a great nation. The clearing of the mystery had relieved the Chilean government of serious humiliation and embarrassment.

Attention naturally turned to the unostentatious man who, by careful observation, had been instrumental in clearing up the international disgrace. What could the government do for him? He asked nothing for himself, but suggested that he had long possessed an ambition to build a model dental college for Chile. The Chilean government asked him to present his plans, and the final result was the establishment of the thoroughly equipped institution that we visited. We received a hearty welcome from this "Sherlock Holmes," Dr. Jermán Valenzuela, the Dean of La Escuela Dental, who has every reason to be proud of his ideal institution.

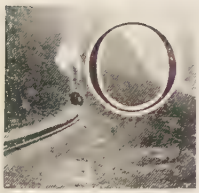
EARLY in the morning of February 21, 1921, we bade adieu to our good ship, *Ebro*, at Valparaiso and boarded a train for our second visit to Santiago, the first arm of our trip over the Andes. The green of the fields and the colors of the flowers were heightened by a heavy dew. Our gradual climb from the valleys to the foothills of the mountains of this narrow country was an ever interesting panorama of hamlets, fields of corn, alfalfa, wheat and oats, and extensive pastures on which well fed cattle and horses were grazing. On the terraces of the hills and on the slopes were many varieties of fruits — mangoes, melons, nectarines, peaches, oranges, lemons, pineapples, pears, alligator pears, plums, apricots, and luscious grapes. We followed the beds of rivers and smaller streams which in March are not over-full. Our train skirted hillsides and gave us an everchanging view of the valleys and glimpses of the second range of hills, with the real mountains beyond, and an occasional view of snow-capped premiers still farther east. At the hamlets the natives, many of them half-breeds, were displaying their wares fruits, bread, and cakes of all descriptions. Along the road-side were adobe or bamboo huts often thatched with palm leaves, and in the open spaces about the huts congregated innumerable children and dogs.

By many meanderings we passed over one range of hills and finally dropped into the valley that holds, like a gem on a Princess' bosom, the capital city of Chile —Santiago. We recognized it by the island-like mountain, Santa Lucia, a sentinel in brilliant uniform which, with distinction and dignity, stands guard in the center of the city.

While in March one can view at leisure natural and artificial beauties of the capital, the society and important professional and business inhabitants are away in the mountains or at the seaside. We enjoyed the beauties of nature and visited the interesting places of this Latin city, drank in the pure, dry air of its valleys, and were inspired by its mountain sentinals that have guarded the valley through the ages.

CHAPTER XIX

THE ANDES



OUR train from Santiago to Los Andes followed a mountain stream and climbed into the foothills which constantly became more and more rugged, until we finally faced the backbone of the Southern continent, the Andes! The trip from the coast at Valparaiso to the coast at Buenos Aires is made in three stretches, the first from Valparaiso or Santiago to Los Andes, Chile, a small city well up in the foothills of the western edge of the real Andean mountains; the second a fourteen hour daylight trip from Los Andes over the Andes by a narrow-gauge cog railroad to Mendoza on the Argentine side; and the third a twenty-two hour trip from Mendoza to Buenos Aires on a broad-gauge train with sleeping and dining cars attached. Los Andes is an attractive city with much green foliage, canals running through the streets, and clean pavements of cobble-stones. A plaza or park, with a promenade and a band-stand, occupies a central location, and here all the citizens congregate, some of them well dressed and refined in appearance, others the peasants, many of them half-breeds in picturesque, highly colored costumes.

The hotel at Los Andes which has clean, cubby-hole rooms, is built about a concrete-floored patio in which elaborate meals are served out of doors.

THE CHILEAN ANDES

AS time would be too short for a daylight trip over the Andes if one started late in the morning, the journey is begun from either Mendoza on the Argentine side or from Los Andes on the Chilean side at six o'clock in the morning. The narrow-gauge train of three passenger coaches and a well-stocked commissary car awaited us in the court-yard of our hotel. It was a cheerful if a sleepy group that climbed aboard, all full of anticipation for the great scenic experience of their

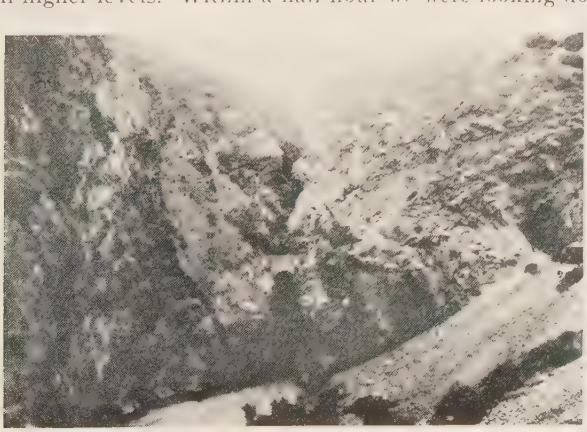
THE ANDES

lives. The little train, business like, began its upward journey. A raging stream from the mountains dashed impatiently about the great boulders, and the ambitious waters threw a spray which in the sunlight made innumerable rainbows. At this level a wealth of low hanging willow trees bordered the banks of the river, and in the fields and on the mountain sides were trees bearing bananas, oranges, and many strange, unknown fruits. Almost immediately we were in the midst of rugged, rocky peaks, the bases of which were green but the tops bare and sharp. The train plunged through tunnels, traversed shelves of rock, crossed valleys, only to find another shelf or another valley beyond; but constantly reached higher levels. Presently many snow capped peaks came into view, and in recesses of the mountains where the sun rarely penetrated were piles of snow and miniature glaciers. Only a foolish and ambitious writer would attempt to describe a mountain scene; and it is an ambitious traveler who after one or two trips can

remember the varied details of a ride over the Andes; and photographs are but a meager reminder and an aggravation.

After struggling through a labyrinth of smaller but impressive mountains, traversing smaller valleys, and following many rushing rivers (any one of which if properly harnessed would furnish power to operate the whole Andean system of railroads), the little train emerged in a wide, placid valley in which is located a little hamlet through which a flat river winds its way. The whole valley might be situated in New England, its surface is so undramatic. On a pile of lumber sat an American women caring for her child, an attractive little tow-head who was playing with improvised toys. The husband and father was undoubtedly an American engineer who busied himself in an attempt to find a way of transforming the unlimited riches of the Andes into American dollars.

But the beautiful valley lying in the sunshine is but a resting place for nature before she shows the sightseer what she really can do to astonish him. Some one called attention to the giant mountains ahead, to the great fields of snow that spread down to our very feet, to one opening and still another a half mile above us. Between these openings which penetrated the heights we could see the little shelf dug out on the mountain side, and were reminded that that was where we were going. Still farther above us, near the clouds, was another shelf constituting one more great switchback to guide our frail train to still higher levels. Within a half hour we were looking down

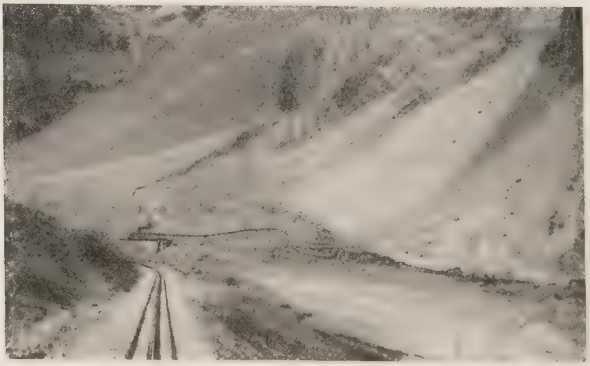


SALTO DEL SOLDADO (SOLDIERS' LEAP), CHILEAN ANDES

from the first shelf to the placid valley where the little child was still playing, and within an hour we were gazing back from the upper shelf, whence we could see the trail, a zig-zag little ribbon of bareness worn out of the eternal rocks representing the trail of the traveler in the older days before the railroad was constructed. All about us were the giant mountains, and while we were nearly two miles above the sea level, they still towered above us in their majesty. At this height we emerged into another valley in which, between the peaks, as if in the palm of the Creator, was the beautiful Inca Lake, five miles long and three miles wide, surrounded by masses of broken rock that some volcanic convulsion had tossed into the breach. We climbed from our train to get a nearer view of this distinguished body of water with the blueness of the Monday rinse, and drank in its beauty and its solitude. Climbing still higher, we finally reached a little barracks and the custom-house that marks the border of Chile. Here we entered the tunnel that connects Chile with Argentina.

THE CHRISTUS—ACONCAGUA

THIS tunnel through the International and Continental Divide is one of the great engineering wonders of the world. It is two miles in length, and has the distinction of being at as great a height as it is long. In its construction the estimate and actual chainage were practically identical, while the floor levels from the two sides met almost exactly. On the Argentine side were the custom house officials of



MENDOZA RIVER

that country, and as we alighted some one pointed to a depression between two heights under which we had tunnelled where stands the Christus, a gigantic statue erected by Chile and Argentina as a symbol of perpetual peace.

As we began the descent on the Argentine side, we saw beside the road-bed a little stream two feet wide, the head waters of the Mendoza River which at its mouth is a mile in width and whose waters supply the great irrigation system used in the vineyards.

Soon after crossing the summit the train creaked to a stop. "All out to see the premier peak of the North and South American continents." We were now among the elect. All around us were great ones. As is true in looking upon a group of distinguished men, it was difficult in such an assembly to pick the most distinguished. Mount Aconcagua, a long, low, range-like monster covered with snow, forty miles away, does not stand up in so satisfying a way as does Shasta, which although only one-half the height has the advantage of being a great mountain among small ones. Aconcagua is a giant among giants.

PUENTE DEL INCA

A FEW miles farther on we disembarked at Puente del Inca, an Argentine mountain resort frequented by the society of Mendoza and Buenos Aires. An attractive hotel

INCA LAKE

ACONCAGUA

occupies a space above the little valley, and all about it tower the mighty peaks of the Andes. Close to the hotel is an interesting natural bridge which spans the boiling Cuevas River, and there are hot and mineral springs which are utilized as medicinal baths. The walk from the station to the hotel in the altitude leaves one breathless, but if of a strong heart, keen for the good things of the table which are served at the hotel.

Having satisfied the inner man we began our descent and followed the little stream that was growing lustily into a rushing torrent. We passed *Los Penitentes* (The Penitents), a mass of volcanic pinnacled rock carved by nature and time to resemble a procession of cowled monks marching toward cathedral-like spires. Occasionally we caught glimpses of snow-capped peaks, and fifty miles up the Tupungato Valley we saw the extinct volcano of the same name with its majestic peak raised some 22,000 feet heavenward.

We remembered that last year, at one point along the Mendoza River, the end of a passenger coach was protruding from its turmoil, demonstrating the insecurity of our shelf on the mountain side, especially as above us in an almost perpendicular line were granite walls, ready to send down an avalanche of rock which would carry with it the trivial work of man. In contemplating the wonders of this trip, one has great difficulty in deciding whether to admire more the work of

nature or the work of man. In many places and at many times one may see duplicates of this great scene; but I doubt if there is a place on earth where for fourteen consecutive hours one may traverse a mountain range and see the constant development of marvelous scenes like those of the Andes, with the premier peak of a continent almost constantly in view as a basis for comparison.

In the afternoon sun the bare cliffs on the eastern descent present not only the usual grandeur but a symphony of startling color—deep reds, deep and pale greens, deep and pale purples, and yellows in a riot of shades, while above is the blue sky with great fleecy clouds caressing ambitious peaks. As the twilight falls, with the sun apparently setting many times as the little train curves about among the mountains, one is awed into silent contemplation by the wonder of it all. Finally darkness descends and the stars and planets seem near enough to touch.

The year before, as we approached Mendoza, we looked up from one of the deep valleys through which we were passing and there in the distance, in the light of a full moon, not disappointingly as in the noonday, stood, boldly and in great majesty, Mount Aconcagua with a panoply of glistening snow and ice. It was a fitting climax for the last scene of a great drama. Night rolled down the curtain, and we sped into the city.

PUENTE DEL INCA, ARGENTINA

IN traveling this route in 1920, Mrs. Martin wrote the following to some of her friends:

"Los Andes—Tuesday, February second: General call at 5:00 o'clock; breakfast at 5:30; and train at '6:20, not 6:21.' Exactly on time, we started over the narrow gauge road which winds up and through the mountains. For the first hour our way lay via Rio Blanco, and repeated the journey of Monday. I was very glad to have seen it before, as it is not nearly so lovely in the morning as when seen at sunset—a theory I have always maintained as opposed to that supercilious 'early bird.' However, on this trip there was much of interest, as the people were all flocking to work and in some places thrashing was already in active operation. This is a most primitive procedure. The grain is spread on a hard, earth floor; four or five horses harnessed abreast are driven furiously round and round over it, suddenly stopped, reversed, and the process repeated until the grain is trodden out. It all seems very curious when scarcely a stone's throw away a stream is just

ROAD IN THE ARGENTINE ANDES

tearing its way by and furnishing no end of power. We found later that there had been very warm weather which had melted the mountain snow rapidly and changed placid, indolent streams into raging torrents. That is probably the case here.

"Did I tell you about the houses along the way? They, too, are most primitive, sometimes of bamboo with straw roofs, and sometimes mud huts or adobe, but almost universally surrounded by lovely flowers, and flowering hedges. Often we saw open-air ovens with some sort of roof protecting them, and we were uncertain whether they are intended for the family bake or for some process of coke-burning.

"As we climbed into the mountains, they became more and more austere with quite a bit of snow here and there. Soon after leaving Rio Blanco, a cog road is employed which jiggles one slowly along at an almost perpendicular climb. All in all, it was a wonderful morning, with constantly changing peaks coming into view, and an ever new panorama unrolling itself before us. Someway, in our mountains at home one seems to see one particular mountain for a long time, and then another; but here it is just a series of one great mass overtopping its neighbor and stretching on and on indefinitely.

"About noon we reached the summit and neared the boundary of Chile and Argentina. Just at this point the train slips into one of the greatest tunnels of the world. It is 10,384 feet long and 10,778 feet above sea level. That is '1,500 feet higher than the Stelvio Pass carriage road, and 3,500 feet higher than Mont Cenis, Saint Gothard, and the Simplon Tunnel. When this tunnel was built, the calculations were so exact that at the junction there was practically no difference in the levels, and the chainage was almost exactly as estimated.'

"At the boundary of Chile and Argentina a huge and impressive bronze Christus has been erected to symbolize the enduring friendliness of the two countries. It was suggested by Bishop Benavente, cast from the bronze of an old Argentine cannon, and paid for by money solicited by the women of Argentina, under the leadership of Señora de Costa. It was placed at the highest possible spot in the boundary mountains, and bears the inscription: 'Sooner shall these mountains crumble into dust than Argentines and Chileans break the peace to which they have pledged themselves at the feet of Christ the Redeemer.'

"From the little station of Las Cuevas we could see nothing of the real statue; but we eagerly strained our eyes toward a dark patch in the snow some three thousand feet above us and

TUNNEL IN THE ANDES

drew what satisfaction we could from our distant view. As we came into the Argentine, the character of the mountains seemed to change, and they became more friendly and placid, with gentle slopes and here and there patches of bright yellow flowers.

"A few minutes before reaching Puente del Inca, our train stopped and there in an opening in the mountains towered before us majestic Aconcagua, the highest peak of the Western Hemisphere, 7,034 meters, or about 23,080 feet. Although it was fifteen miles away, its snowy head glittered in the brilliant sunlight, and its silent grandeur touched with awe even the distant observer.

"At Puente del Inca a wonderful natural bridge, medicinal springs, and a good hotel combine to make a popular resort. When the train stopped, I got out and, climbing into a waiting carryall, was whisked away to the nearby hotel. The wisdom of my action was demonstrated when Dr. Mayo and Franklin came puffing up, well winded by the heat and the altitude. At the entrance to the hotel we were greeted with shouts and cheers from the assembled guests, and found the stars and stripes and the blue and white of the Argentine side by side in the decoration of the building. The band played for us and everywhere the greatest enthusiasm and excitement were manifest. The luncheon was excellent, and well served. As usual, there were many courses and a variety of wines. As soon as it was over we were escorted back to our train by the

entire community, and wildly bidden God-speed in a chorus of friendly 'Adios.'

"Then began one of the most wonderful experiences of my life as hour after hour the most majestic, multi-colored mountains crept by us. Not a tree, not a shrub, just masses and masses of rock piled on each other, tier upon tier, and of such marvelous color, now pink, now yellow, now deep red, with here and there splashes of green, gray or blue — all glowing and quivering under the warm afternoon sun.

"Whenever the stream, which is now the Mendoza River, was seen — and that was almost constantly, as we followed its bed — the water was tearing along like mad and we began to see traces of the slides and washout which had detained us. At one place we passed the spot where a train, carrying only its crew, left the track and pitched into the water below, where we could still see the cars lying bottom side up. It is a mystery that this road can ever be kept open at all. Much of the way the track is a mere thread on the side of a mountain whose structure is such that it seems as though the slightest jar might precipitate an avalanche; just loose stones held insecurely together by soft dust and sand; then will come great masses of rock, looking as though only the eternities would dislodge them; and so it goes, constant variation.

"Owing to the serious difficulties on the road, our train crept along more and more slowly and we lost more and more time. The sun went down, the moon came up, the mountains loomed dark and threatening and the river tore along alarmingly swift and near. Finally, at about ten o'clock, we neared Cacheuta, which is celebrated for its medicinal baths. By digging only two or three feet below the earth's surface, water gushes forth containing various medicinal properties and varying in temperature from seventy nine to one hundred and twelve degrees. The little town prides itself on its quite pretentious hotel, and as many as 20,000 guests per annum visit the resort. But here, less than a week ago, occurred a bad slide which carried the road and a portion of the hotel into the river, and at which time several of the guests were drowned. Now, in spite of desperate efforts, the road had not been sufficiently repaired to make it safe for passengers; so we all disembarked, and left our worldly goods in the cars which were pushed over a rickety bridge, while we followed on foot, single file. It was rather a thrilling sensation to stand out in the open near this little South American town — the stillness of the night, the mountains all about us, the Southern Cross shining over our heads, the moonlight falling on the glistening snow of Aconcagua

towering in the distance, all combined to paint a never-to-be-forgotten picture.

"Presently we climbed once more into our train and crept on our way, always hugging the river which at times seemed only a foot or two from the tracks, and which, in places, was, we were told, forty-five meters deep. It was midnight when we finally pulled into Mendoza, and bag and baggage left the Trans-Andean Railroad and transferred ourselves to the sleeping cars waiting for us on the Buenos Aires and Pacific road. This is a wide gauge road and runs some three hundred and fifty miles or more in an absolutely straight line, the longest straight track on record. Somewhere there is an 'S' in the road, and then it goes on straight again for considerably over two hundred miles. Two fine dining cars, attached to our train, were ready for action upon our arrival, but most of us preferred our sleepers, as we found from five thirty a.m. to twelve thirty a.m. quite long enough for one day.

"The sleeping cars were of the continental type, and not uncomfortable. Each room was equipped with a washbasin, electric lights and an electric fan. The space between the berths and the wall was not more than two feet, and was the only available place for bags; consequently, there was practically no standing room.

"The trip across the plains is reputed to be indescribably dusty and hot, but the recent torrential rains had left this region still moist and moderately cool, for which we were devoutly thankful. The country is very flat, somewhat resembling vast stretches of our own western prairies. Sometimes it is barren, with great bunches of pampas grass nodding at one; sometimes there are immense corn and wheat fields; and over and over again we saw herds and herds of cattle beef enough for the world. There are few villages, and still fewer farm houses, but this may not be remarkable, as the population of all Argentina only averages eight to the square mile. All day we rode over this rather monotonous country and grew hot and tired, but never downhearted, there was so much to see and enjoy.

"We had been told that we might expect to reach Buenos Aires at about ten o'clock; but by good fortune we made up two hours and arrived at eight. Quite a committee of surgeons, headed by Dr. Herrera Vegas and Dr. Pasman, met us, then after submitting to the operations of the omnipresent photographers we were put into Dr. Herrera Vegas' car and driven to the Plaza Hotel, where delightful rooms were awaiting us and where we were only too glad to sink down and rest."

CHAPTER XX

ARGENTINA

WEARY and hungry, we transferred to a broad-gauge, solid train of the continental type which consisted of comfortable compartment sleepers and two well-stocked diners. The linen was clean, the waiters keen, and the food delicious and welcome to a group of tired people who, each in his own way, had "taken in" the Andes.

Mendoza, the wine center of Argentina, its fields for miles filled with growing vines loaded with purple fruit, is a well-lighted, modern city. Its altitude makes its climate attractive for the people of Argentina during the hot months of the year. Although unusual for this season, a terrific rain had fallen for twelve hours, and had, they told us, extended east over the normally dusty pampas. Water stood in the low places of the streets, rushed through the irrigating ditches, and everywhere was delicious freshness. This presupposed a peaceful sleep, with fresh air filtered of all dust.

THE PAMPAS

WHEN we awoke in the morning, our train was passing quietly over the flat plains. The roads were wet, and large fields covered with water stretched in every direction. While we ate our breakfast we could see from the window myriads of wild fowl. At several places great flocks of flamingoes flew away and circled back to light again upon the water after the train had passed. These creatures, as large as swans and graceful in outline, with a wing spread of from three to four feet, are of the most beautiful scarlet, and as they leave the water and fly in flocks one can liken them only to great flames of fire.

We were now entering the great agricultural belt. It was autumn, and a series of gasoline tractors were pulling great gang-plows, preparing for the sowing of the winter wheat. A few months earlier golden grain would have greeted us, and

we might venture to suggest that oxen were used for plowing. The Argentine pampas are endless, and for hundreds of miles they are as flat as a billiard table. As far as eye could see, like a restless ocean, stretched the waving green of the pampas grass, with here and there the hoary whiteness of its bloom appearing as white-caps in the surf. The far-scattered ranch-houses, with their ever-present windmills, dotted the horizon, and loomed like ships upon the deep. The illusion was constant, and one continually felt that he was riding along some coast-line, gazing seaward.

The pampas produce everything that will grow in Nebraska, Kansas, or Iowa. There are miles and miles of grazing lands, with immense herds of cattle, sheep, and horses that are destined for the great markets of Buenos Aires, of Europe, and often the United States. Now and again a *gaucho* or cow-boy in full regalia may be seen riding out to his herds. Occasionally we saw flocks of ostriches who were feeding in their awkward fashion in these great pastures, and who like colts in a Wisconsin field ran away in mock fright as the train appeared, displaying a wealth of fluffy feathers that would make a Fifth Avenue milliner turn green with envy.

There are not many towns, and few comfortable farm houses. The land is owned by non-residents, and the tenants

AVENIDA DE MAYO AND THE CAPITOL

evidently have neither the inclination nor the authority to demand the comforts that are enjoyed by the farmers of our own western and central states. At any rate, it so appears to the casual traveler. Country roads which might attract the automobile tourist have not yet been constructed in Argentina.

BUENOS AIRES

NO matter where or in what manner one has traveled, he must be agreeably surprised by the charm and beauty of the metropolis of South America—a cosmopolitan city, possessing beautiful boulevards, parks, palatial buildings, continental theaters, museums, libraries, art galleries, universities, clubs, and beautiful suburbs in which resides its summer population; but beyond this it has an intangible fascination that one cannot describe; that holds one in thralldom as do some of the famous capitals of Europe.

This city, although founded in about 1530, was not permanently settled until the latter part of the sixteenth century. Its population is now more than a million and a half, and it is so situated that there is ample room for expansion. Its people are independent and proud, and they have a charming manner

AVENIDA FLORIDA

MEMBERS' STAND, THE HIPPODROME

and a friendliness that makes one admire them and warm to them, and that creates a desire to live among them and to absorb their spirit. While they are a serious people, they have a desire for pleasure and social intercourse, as is testified by their clubs, their pleasure parks, their race tracks, their theaters, and their opera houses. They are scrupulous in the care of their people, as is evidenced by their system of hospitals, which are not excelled by those of any city of the world; also in their educational system, including the early care of their children, their later, higher education, and their well-equipped and well-conducted universities and professional schools of law, medicine, engineering, and theology.

Weeks may be occupied here, in the most luxurious surroundings, enjoying and becoming acquainted with these great neighbors of ours in the southern portion of this, our twin continent, where the weather is never colder than 40° F., nor warmer than 80°.

Zoölogical Gardens—Señor Clemente Onelli—Señor José Luis Cantilo

WE spent a most interesting afternoon in the Zoölogical Gardens under the guidance of the founder and director, Señor Clemente Onelli. This wonderful garden represents the

life-work of Señor Onelli, and to him the people of Buenos Aires owe an inestimable debt of gratitude. At tea time we were joined by His Excellency, Señor José Luis Cantilo, the Municipal Intendente, a most interesting and agreeable man. He is the chief executive of Buenos Aires, and untiring in his work for his city, being personally interested in all of its activities, including its hospitals. Later he sent us tickets for a great open-air municipal concert, given on Sunday evening in one of the parks and attended by thousands of people. Both the Intendente and Señor Onelli were most thoughtful and courteous in their attentions to the ladies of our party.

Argentine Hippodrome

ON Sunday, Dr. Robert Halahan took Dr. Watkins and me to the golf club, where we enjoyed playing over a very attractive course. The ladies joined us at luncheon, and later we attended the races at the Hippodrome. Although the season was practically over, the races were most interesting, and we could well imagine the Hippodrome as a society show-place in the height of the season. The race track, with its comprehensive equipment and club houses, and members' stand of unrivaled beauty, has made the Argentine Hippodrome one of the great sporting clubs of the world. The receipts from

THE HIPPODROME

SPANISH MONUMENT

this enterprise, over and above the necessary expenses for upkeep, are distributed among well deserving charities.

One naturally visits the Plaza del Congreso, a great court of honor with garden plots, fountains and statues. In one direction, along the Avenida de Mayo, a great thoroughfare carved into the old city, is the President's Palace, and in the other, with an imposing approach, is the National Capitol. (This street was not named for our distinguished surgeons, but for the month of May in which, in 1810, occurred the declaration of independence of Argentina.)

Señor Hipolito Irigoyen

I HAD the privilege of an audience with Señor Hipolito Irigoyen, who was then the distinguished President of Argentina. The object of my visit was to convey to him information about the memorial to General Gorgas which is in contemplation in Panama. I found my distinguished host very sympathetic to the project, and fully acquainted with the work and reputation of General Gorgas. Señor Irigoyen has a very charming personality, a strong physique, and a dark serious face. My interview with him, which was conducted with the Secretary of the American Embassy as interpreter, was extremely interesting and satisfactory, and I felt that I had added one more influential link of friendship to the Gorgas memorial.

GEORGE WASHINGTON MONUMENT

On approaching the palace, and while awaiting the time for my appointment, I was particularly struck with the gaudiness and quaintness of the uniforms which are worn by the guards. The Secretary of the Embassy who accompanied me said that these men are the guards of honor to the President; that they belong to the Mounted Grenadiers, a corps that was famous in the time of San Martín, and that they have the privilege of wearing the same type of uniform that was worn by the veterans under that famous warrior in the war for independence.

Statues

THE many beautiful fountains and groups of statuary scattered throughout the parks and in the open spaces form one of the greatest attractions of the city. At the time of the centennial of the independence of Argentina in 1910, the principal nations of the world presented monuments commemorating the event. Of them the Spanish monument is the most conspicuous, while the United States is represented by a dignified statue of George Washington. However, one seldom sees a vantage point in this beautiful city without something that will appeal to one's artistic taste. There are no bare spots and no glaring defects. Fortunately, nature here embellishes so rapidly with its foliage and its flowers that sordidness and abandoned spots never prevail.

EL TIGRE HOTEL

El Tigre

ONE of the impressive and distinctive features in the environs of Buenos Aires is El Tigre, an interesting freak of nature which transforms a large area of land contiguous to the Rio de la Plata into a group of small islands. Natural waterways, varying in width from twenty to two hundred feet, have made of this area of land and water a symmetrical checker-board, which extends for many miles. On the islands created by the waterways are estates with handsome homes, orchards, flower gardens, wharfs, and bathing places, while in the surrounding channels are myriads of motor boats, row boats, and pretentious yachts. This wonder of nature, twenty miles distant from Buenos Aires, is one of the summer resorts of the metropolis and may be reached by boat, tram car, railroad, or automobile. On our previous trip, Dr. Pedro Chutro, one of the distinguised surgeons of Buenos Aires, introduced us to this interesting place. On our second visit, our hosts were Dr. Frank Pasman and his uncle. The trip made by automobile is most enjoyable as it follows more or less closely the river, traverses some interesting towns, and passes many attractive

estates. The whole country about this southern city is one beautiful garden in which is grown everything that gladdens the eye and aids in the sustenance of life.

On arriving at El Tigre we visited an attractive Rowing Club and then embarked on a smart little motor boat belonging to our host. Because of the regularity of the turns, and the symmetrical division of the land into islands without number, one almost duplicating the other, it was difficult to realize that we were traveling otherwise than in a circle as we traversed mile after mile of the water passages. However, each island was a new creation with its distinctive home, its distinctive dock, its distinctive foliage, its distinctive flower garden, and its distinctive orchard. Often great weeping willow trees obscured the shore line and beyond one caught glimpses of a villa, and at other places peach, plum, quince, or other fruit trees spread their boughs over the water's edge, and tempted one to pick and eat.

On this second occasion for two or three wonderful hours we explored this Venice-like territory. Once we disembarked at an island that was owned by a friend of our host. We visited the flower gardens, the vegetable gardens, the vineyards loaded with luscious grapes, the chicken farm, and then the playgrounds and the tennis court. Later in the afternoon we landed at an attractive dock and here, at a little tea house, we sat and had our tea, sandwiches and fruit.

EL TIGRE

They then took us to what our host called his "shanty," a comfortable bungalow located on one of the smaller islands, where he has everything for which his heart could wish to make life worth living. A large friendly dog met us at the dock. Within the house we were introduced to the Señora and other friends and children, and in the grounds surrounding the house we saw the chicken yard, bee-hives, a vegetable garden, and an abundance of flowers; everything trim and beautifully kept. Each morning after his plunge and his fruit and coffee he goes to the station in his motor boat as we go to our suburban stations in our automobiles.

El Tigre is one of society's retreats; but the people of the great city are privileged to enjoy the unusual beauty of the place. A large hotel and an amusement pavilion occupy a site on one of the principal waterways near the tram and railroad station, and from here at frequent intervals excursion boats make a tour of the principal water avenues. Our day at El Tigre with our charming hosts was one long to be remembered.

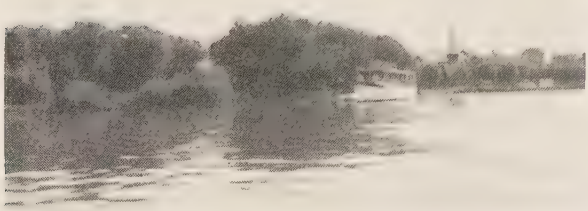
Haciendas

FROM the Log, 1920. With Dr. and Mrs. Mayo we enjoyed an excursion by automobile as guests of Dr. Herrera Vegas to his *hacienda*, or landed estate. We were accompanied by Dr. Cranwell and his daughter, and Dr. Pasman and his cousin. The *hacienda* consists of forty-five square miles of agricultural territory lying about half way between Buenos

EL TIGRE

Aires and La Plata. It is one of the largest and most attractive landed estates in Argentina. This day's visit to Dr. Herrera Vegas' estate, which is one of the side interests of this remarkable surgeon, is worthy of a separate chapter. However, we may fix in our minds a few commercial facts regarding the estate, on which there are one hundred thousand cattle, two hundred thousand sheep, and other animals in proportion, and on which are raised quantities of grain, corn, and produce.

Upon another day we were the guests of Señor and Señora Miles Pasman, most interesting people. They speak English perfectly and have the appearance of substantial New Yorkers. They were both born in Argentina, but of parents who had but a short time before migrated to that country from New York. Their son, Dr. Rodolfo Pasman, is one of the distinguished surgeons of Buenos Aires, and their nephew, Dr. Frank Pasman, another young surgeon, has married one of their daughters. They wondered if we would enjoy an afternoon motor ride to their country place. Our delightful experience on the occasion of our previous visit to the *hacienda* of Dr. Herrera Vegas, made us anxious to go with our new friends to their estate, which they so modestly called "a camp." There were two machines, and our ride took us out of the city a distance of about fifteen miles. The "camp" proved to be an estate of many acres with many buildings for the proper care of their large family, places for the care of live stock, a poultry yard, power plants, swimming pools, and tennis courts. In the conservatories are found every modern device to care for a comprehensive botanical garden, in which not only specimens of



EL TIGRE

all South American trees and shrubs are housed, but also under careful cultivation many of the plants of other climes, all properly labeled and cared for by an enthusiastic expert head-gardener with an army of helpers.

The house, a charming residence of manor house capacity, located in a large park-like portion of the estate, was one of the surprises of this mere "camp." But the glory of it all came when we began to meet the family. A number of daughters and daughters-in-law were enjoying the hospitality of the "camp"; and then came their children, ranging from babes in

EL TIGRE

arms to dignified young men and women sixteen and seventeen years of age, all glad to see grandfather and grandmother. Everywhere one looked were these attractive grandchildren, each one a beauty, each one with distinctive characteristics, but each one a little aristocrat. There were thirty-seven of them, and the proud grandfather had a standing offer of a bonus of one thousand dollars in gold to the mother of each additional one, with the stipulation that the bonus would be automatically increased until the forty-fifth grandchild, which would bring a super-handsome solace. What a reproach this family is to our practical, barren people!

Inspection of the estate under the guidance of our enthusiastic host and hostess and their daughters, tea with the delightful grandchildren assisting at the function, good-byes, and the drive back to the city with the automobiles filled with

ART GALLERY

flowers, left us with a picture of the home life of the best people of this purple country that excited our intense admiration.

Luncheon of the American Club

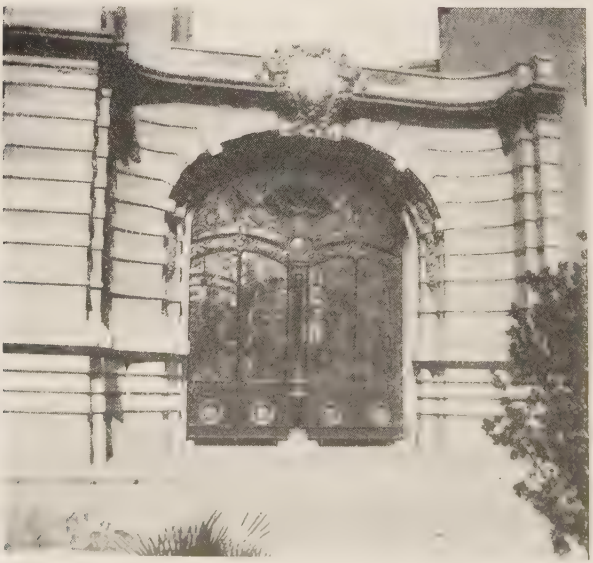
EVERYWHERE in Buenos Aires one recognizes American and other English-speaking people. In 1920, Dr. Mayo and I were guests at the weekly luncheon of the American Club of the city. In 1921, Dr. Watkins and I were invited to fill a "return engagement." It was inspiring to meet about three hundred English-speaking business men of Buenos Aires in the large banquet hall of the Plaza Hotel. The group impressed one as would a great human dynamo; scarcely a man among them was over forty-five years of age, and many were very much younger. The southern climate apparently had not changed their natures, as they were alert and clean-cut in appearance. The American Club has assumed the task of acting as a board of censors or credentials on Americans who come to Buenos Aires to do business. Adventurers or dishonest bluffers are not wanted, and there is a genuine desire on the part of this organization to secure for the American

business man the respect of the Argentines. And while they are doing business in Argentina, like the Englishman, they remain loyal and devoted to their own country.

We were the guests of this Club on the fourth of March. Therefore, in concluding my short response as their guest I reminded them that at one o'clock when I began my talk a great President of their country had retired from an honored administration. At the mention of Mr. Wilson's name they all arose and applauded for a full minute. At the close of my remarks I said that now a new President had assumed control, and, not as Republicans or Democrats, but as Americans, I suggested that they drink a health to the new President, Mr. Harding, to which they again responded with enthusiasm. One cannot overestimate the influence of an organization like the American Club.

LA PLATA

WE visited of course La Plata, the capital of the Province of Buenos Aires. The city itself, like our own Washington, was planned along ambitious lines, and a motor ride through



ENTRANCE TO A PRIVATE HOME

AVENIDA DE MAYO

its wide streets lined with palatial government buildings, universities, national museums and other public buildings is much worth while. But driving through the city proper at the time of year when the University is closed gives one the feeling that it is an abandoned city. Visiting it, however, as we did in 1920, we gained a happy impression of the capital city and its environs. At that time we were taken in motors from Buenos Aires to La Plata by our friend Dr. Herrera Vegas, and were the guests of the Faculty of the University.

We breakfasted in one of the corridors of the University. The professor of anatomy, Dr. Pedro Belou, made an address in Spanish, to which we responded in English.

La Plata, from a commercial standpoint, is fast becoming famous for its packing houses, established by Americans familiarly known as Swift, Armour, Morris, and Wilson.

THE *VANDYCK* CRUISE

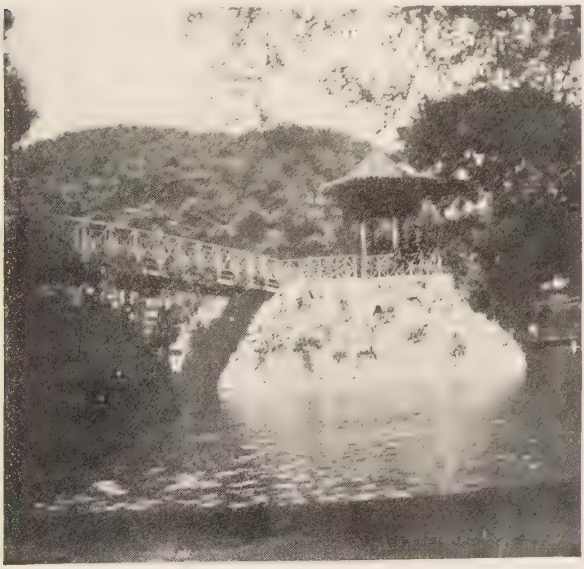
FROM the Log, 1923. After three days of delightful rest on our comfortable SS. *Vandyck*, we arrived on the morning of March 16 in Buenos Aires, where we were to spend five days in sightseeing and entertainment—social and professional enjoyment. Dr. Marcelino Herrera Vegas, Dr. José Arce, Dr. Frank Pasman, Dr. Rodolfo Pasman, Dr. Robert Halahan, other Fellows of the American College of Surgeons, our Consul, a representative of Mr. John Riddle, our Ambassador, and officials of the Argentine Government were early on board to welcome us. An elaborate schedule of clinics was handed to us, one that filled our surgeons with joy. Sightseeing rides and excursions had been prepared by our official guides, Thos. Cook & Son, and with these had been interspersed official entertainments which did not conflict. The high points were a reception by Ambassador Riddle, a reception by the President of the Republic, Señor Dr. Marcelo T. de Alvear, a reception at the headquarters of the medical society, and a visit to the medical school and the Department of Sanitation. There were many private entertainments which kept everybody busy, one of the most enjoyable being a luncheon given by Dr. Herrera Vegas to a large group of our ladies at the Plaza Hotel. Following this there was an excursion of Fellows and ladies to Las Hermanas, his large *estancia*.

DR. MAYO'S GENERAL OBSERVATIONS

"ARGENTINA is readily accessible from Chile by the Trans-Andean railway. The frontier is reached at a height of about three kilometers above sea level, at which point the railway tunnels its way through four kilometers of mountain range underneath the old pass. The railroad follows the Rio Blanco on the Chilean side by a very sharp ascent and many windings, often uncomfortably close to the edge of the narrow ledge on which it is built. On the Argentine side the descent to the pampas or great alluvial plains which extend from the foot of the Andes approximately eight hundred miles to the sea is less abrupt, and follows the cañon of the Mendoza River.

"At least a third of the nine or ten million people of Argentina live in cities, more than a million and a half in Buenos Aires alone. The country is very fertile, naturally without trees, but eucalyptus, Lombardy poplar and weeping willow trees have been planted freely in certain districts. The land resembles that of the Dakotas, and is farmed in very large tracts or *estancias*. The land owners have become enormously wealthy. Blooded cattle may be seen in herds of many thousands. Argentina, with its rich lands, situated largely in the temperate zone, will eventually become the United States of South America.

"The railroad system in Argentina is excellent; the equipment and management are on the continental plan. Buenos Aires, which of late years has been controlled by the radical party, dominates the country politically. Laws controlling the disposition of property on death, to break up the large estates, have been passed recently. . . . . Numerically the Italians are the dominant race. The Spanish, English, French, German and American colonies are relatively small.



IN PALERMO PARK, BUENOS AIRES

"Buenos Aires is a beautiful city, the Paris of South America. Its gardens, parks, sidewalk cafés, boulevards, statues and ornate buildings give it a charm that is all its own. There is a public lottery system in Argentina, and the profits are used for charities. Horse racing is the national pastime, and in this sport Argentina leads the world. The Hippodrome is controlled by the government, but is privately managed. The betting is princely; thousands of dollars are lost and won each racing day. Little attempt is made to control the liquor traffic.

"The general standing of education in Argentina is high. The primary course is five or six years, depending on the ability of the student, and is compulsory. Argentina has four hundred school buildings on the American plan, most of them modern and completely equipped, including lunch rooms, where bread and sterile milk are served to the pupils without charge. The second course is six years, but is not compulsory. Modern languages are taught in this course, and the pupils are not considered 'educated' until they have acquired at least three, at the present time Spanish, French and English. One unique feature of the university system in Argentina is the method of control. One-third of the votes are in the hands of the full professors, one-third in the hands of the junior professors and instructors, and the remainder with the students. Strikes by the students are not infrequent, and all classes are suspended until a settlement is reached. It is difficult to obtain an unprejudiced opinion of this innovation in Buenos Aires, but it may at least be said that it is popular with the students. The day we visited La Plata University the medical students were on a strike. Even in the primary schools strikes are frequent. A recent student strike of pupils under ten had to be settled on bended knees, the parents furnishing the knees and the shingle."

CHAPTER XXI

URUGUAY

HROUGH the port-holes of our state-room on the palatial steamer which conveyed us on our first trip from Buenos Aires to Montevideo we could see the mountain that was observed four centuries ago by the Portuguese sailor, from whose outcry, as the story goes, the city of Montevideo received its name. The hill now appears small as compared with the city of Montevideo; but with its fortification and flag-staff, it offers its welcome to the stranger.

This peninsula city, with its extensive sanitary docks, resembling those of Panama, is another of the beautiful cities of the world. It is the hub of the proud little country of Uruguay. It is strictly modern, with interesting architecture, parks, boulevards, and public buildings of importance and dignity. The city houses a population of sturdy, dignified, business-like people who reliantly meet you face to face. Like the peoples of the other South American countries, they evince no trace of provincialism. They know their Europe and North America, and they are thoroughly cosmopolitan. This country, early in the colonization of its land, was the melting-pot of competing Portuguese, Spanish, and English; and later in its development it waged a struggle for independence against Argentina, Paraguay, and Brazil, the contenders for its attractive acres. Like all of the principal South American countries, it finally emerged from its formative struggles and quietly established its independence in the early part of the nineteenth century, when the mother country, Spain, was busy in its own reconstruction after the long Napoleonic wars.

"No, we are not Spaniards," they will say, with spirit. "We are Uruguayans." "But," the American will reply, "You certainly speak the Spanish language." "Yes, we do speak Spanish; and you, as Americans, speak English. But surely you do not acknowledge that you are English." And so the principal city, of which they are so justly proud, has

grown to a metropolis of nearly five hundred thousand inhabitants.

Uruguay, in its government, is one of the most progressive countries in the world. In the conduct of its business, it utilizes in the most thrifty manner its great production of live stock, harboring immense packing plants and carrying on an industry of great profit. The country was one of the first to establish the eight-hour working day and to recognize the right of men who labor with their hands to sanitary homes and wholesome working quarters. There is a workman's compensation law.

The educational system of the country provides for and encourages a system of universal education, particularly emphasizing the primary branches. The university system is comprehensive. Among its departments, under separate faculties, are literature, law, sociology, medicine, pharmacy, commerce, veterinary and other minor subdivisions, each with special laboratory, library, and museum adjuncts.

Uruguay proves its commercial supremacy by the fact that its financial standing is maintained at the highest mark, and its unit of currency is based on the gold standard which keeps

SCENE IN URBANO PARK, MONTEVIDEO

BATHING BEACH, PARQUE HOTEL

it at a parity to that of the United States. The government controls the telegraph and postal systems, and has a rigid banking law.

This is a country of beautiful flowers. The climate is such that roses grow in profusion throughout the year. It enjoys a delightful summer, and lies far enough north to be beyond the frost line, so that the winters cannot be severe. The mean temperature in the winter months is 52°F.; spring, 64°; summer, 71°; and autumn, 61°. The mean temperature for eight years, to 1914, was, for Montevideo, 61°, the extreme maximum for that period was 96°, and the extreme minimum, 34½°; the average rainfall for the year, thirty-nine inches; the average fair, sunshiny days, 225 per year for eight years.

Its water supply is wholesome and pure, its streets are well paved and clean, and almost the entire circumference at its water's edge is swept by the wholesome waters of an inland sea in the form of a great fresh water river.

It is no wonder that these fortunate people present to one's view an air of contentment; that they have a spirit of optimism; and that they are industrious and prosperous.

Visit their country as you would visit France or Italy—to enjoy the perfection of climate and the charm of companionship with a cultured people. Go to their sea-ports, attend

PARQUE HOTEL AND BEACH

their operas in their palatial opera houses, learn of their business methods, and in your sojourn you will see many things that will give you food for enjoyment for the long winter evenings in your own wonderful land.

DOCTOR MAYO'S comments (1920): "Uruguay, with one and one-half million inhabitants, has a great agricultural future. In general, the people are like the Argentines. The public administration is extraordinarily efficient. Montevideo, the capital, has about 400,000 inhabitants. It is a clean, attractive city, with streets well paved, even in the outskirts, and many fine parks, boulevards and suburban seaside resorts. It is considered by many travelers the most beautiful and healthful residence city on the east coast of South America. One of the boulevards, extending eight miles along the ocean, is named for ex-President Wilson. The city is a hundred miles below Buenos Aires on the outlet of the La Plata River, which forms the southern boundary, the ocean forming the eastern boundary.

"Gambling is a legitimate pastime, or vice, throughout South America, and Uruguay is no exception. The government supports beautiful hotels, seaside pavilions, hospitals

and other charities from the proceeds of the roulette wheels. Montevideo is the Monte Carlo of South America.

"During the Great War, Uruguay stood staunchly with the United States, and her President, Señor Baltasar Brum, a brilliant young statesman who is well known in diplomatic circles in Washington, and the able foreign minister made decisions which will be permanent additions to international law: in substance, first, that a republic fighting for her sovereign rights is not a belligerent and has the right of asylum and protection from all republics, and, second, that when the United States is forced into war to protect her rights she is protecting the rights of all republics, and all republics become parties to the conflict. Uruguay promptly followed the United States in declaring war on the Central Powers."

ON our second visit in March, 1921, Dr. García Lagos, Dr. Enrique Pouey, and Dr. Juan Pou Orñla, three surgeons whose acquaintance we had made the previous year, met us at the dock and conveyed us across the city to our hotel, which faces the sea on the other side of the peninsula. We were comfortably located in pleasant rooms with balconies that overlooked one of the popular bathing beaches.

CARRASCO HOTEL

At three o'clock in the afternoon we were taken for an automobile ride by Dr. and Señora Pou Orfila, who were our gracious hosts on several occasions. Professor Pou Orfila is one of the distinguished gynecologists of Uruguay. We drove to Pocitos, one of the beach resorts close to the city, then along a new boulevard which skirts the river for many miles. It is called the Rambla Wilson, in honor of ex-President Wilson. At Pocitos the Rio de la Plata is many miles in width and is really an arm of the ocean. A long swell, not unlike that of the ocean itself, constantly breaks upon its beach.

In the few days at our disposal in Montevideo, between professional duties, we were very busy visiting the many points of interest. We took a trip to "El Cerro," the famous Spanish fort on the hill, near which has been built the Swift packing plant. We motored to the new Carrasco Hotel which is popularizing another fashionable beach resort. We drank tea, inspected the beach, watched the roulette players in the attractive casino which is a part of the hotel, and returned home over the Rambla Wilson. It is curious to note that this little progressive Republic recognizes and is indirectly a patron of roulette and other games of chance. Several casinos are conducted, or at least countenanced and licensed, by the municipality of Montevideo, and excess profits from this source are devoted to the maintenance of charitable institutions.

PRESIDENT BALTASAR BRUM

THROUGH the courtesy of Mr. Robert E. Jeffery, then American Minister to Uruguay, I had the pleasure of an interview with the President, Señor Baltasar Brum, a young man, apparently not more than thirty-five years of age, who possesses a strong and agreeable personality. Dr. Webster E. Browning, a gentleman to whom I am under great obligation, acted as my interpreter.

My object in seeing the President was to bring to his attention information about the proposed memorial to General Gorgas. As one phase of this memorial is to take the form of an institute for the study of tropical medicine, he showed a sympathetic attitude.

BANQUET AND RECEPTION, PARQUE HOTEL

A VERY pleasant diversion and a function that flattered Dr. Watkins and me was a dinner given to us at the Parque Hotel by some of our surgical friends of Montevideo. Our table occupied a conspicuous place in the center of the main dining room and recalled to my mind a similar luncheon that was given to Dr. Mayo and me during our one day's visit the year before.

Later in the evening, in the ballroom of the hotel, a reception was tendered to Mr. Jeffery, our American Minister who was about to return to the United States. We were present and had the pleasure of introducing some of our friends to Mr. Jeffery and the other members of the American colony with whom we had previously become acquainted.

THE *VANDYCK* CRUISE

FROM the Log, 1923. On March 22, we docked at Montevideo for a three days' sojourn. Again we were greeted by the distinguished citizens of the metropolis of a South American Republic. The members of the College, the Dean of the Medical Faculty, representatives of the government, our own United States Minister, Mr. Philip, and our Consul, were there to meet us. After the greeting and the inevitable camera practice that is always conspicuous in the Latin-American countries, we drove to the medical school and the university.

For three days we were the recipients of a continuous round of delightful entertainment, and were given an opportunity to visit all places of interest to members of the profession of medicine. The principal features were visits to the innumerable clinics and hospitals and their medical school, a reception by the president of the Republic, Señor Dr. José Serrato, a reception and tea by our Minister, Hoffman Philip, and a formal evening medical meeting, attended by our Fellows in their College gowns and presided over by an Uruguayan Fellow of the College, Dr. Alfredo Navarro, president of the Society of Surgery of Montevideo, at which four of our Fellows—Dr. James F. Barnhill, Dr. A. J. Crowell, Dr. R. D. Kennedy, and Dr. James T. Case—presented formal scientific papers. Besides, small groups of the Fellows and their ladies interested in a variety of subjects were entertained by our hospitable hosts at luncheons and dinners.

Two of the Fellows of the College from Montevideo, Dr. Horacio García Lagos and Dr. Enrique Pouey, were in Europe at the time of our visit; and Dr. Juan Pou Orfila and Dr. Julio Bauzá, accompanied by members of their families, came to the United States on our ship, each to spend eight months making a study tour of our clinics. They are already conversant with our language, and we hope and trust that they will return from this visit with their love for our country enhanced, and that they will come to us many times.

CHAPTER XXII

BRAZIL

IN January and February of 1920, when Dr. W. J. Mayo and the writer visited Peru, Chile, Argentina, and Uruguay, we were unable to make satisfactory traveling arrangements to visit Brazil.

We had long been aware of the high reputation accorded to the medical profession of Brazil. Through correspondence we had learned something of their institutions, and through the visits of some of their men to the United States we had become personally acquainted with a few of them. But it was with unusual curiosity and with no little anxiety that we looked forward to meeting them in their own country and in their own environment. Our visit in 1921 included Santos; São Paulo, the capital of a principal state; and Rio de Janeiro, the Federal capital. We deeply regretted that we could not visit the other medical universities, particularly those at Bahía and Pernambuco.

This sketch may be criticised because of its detail pertaining to some of the impressions gained by travel in a tropical land that is so different from our own country; but one must be adamant to travel in Brazil and not be fascinated by its wealth of physical beauty and the charm of its interesting people. Therefore, at the risk of tiring the reader by details, and in order that he may see things as they appear to the casual traveler in obtaining his first bird's eye view, I shall quote extensively from my log written from day to day, supplementing, where necessary, with additional notes.

Instinctively one thinks of that great tropical country of the southern continent of America as *Brazil, the brilliant!* Its area is larger than the great central republic of North America; it is a virgin empire the material resources of which are inexhaustible, awaiting the next advance in scientific civilization to enter into competition with the world in supplying its people with food and the other material luxuries of life.

TROPICAL SCENE IN BRAZIL

The southern coast border, with its enterprising people, is already accepting the teachings of the sanitarians and enjoying the first fruits of the new awakening.

Both Rio de Janeiro and São Paulo, the two leading cities of Brazil, have enjoyed a wonderful growth. São Paulo, which in 1890 had a population of only slightly more than 60,000, is now a city of nearly 600,000, while the population of Rio de Janeiro is now about 1,160,000. Industrial progress is also great. Before the war, Brazil depended entirely on Europe and the United States for manufactured articles. Bad conditions beget their own remedies. One may now buy clothes, shoes, sterilizers, bath tubs, plumbing goods and so on of native manufacture much cheaper than the imported article. Agricultural development is also proceeding rapidly. As a proof of alertness along this line, it has been said that poison gas is now being used by the south Brazilian farmers to destroy termites and other insect-enemies. It would be strange if this terrible destructive agent were yet to prove a great boon to mankind. Brazil is already a great manufacturing and exporting nation, and Rio de Janeiro is destined to become the New York of South America. The spirit of friendliness in Brazil for all things American was very marked.

HOTEL IN GUARUJÁ

The tropical and temperate climates run their regular courses in this favored land. Great rivers afford passage to the shipping of commerce and irrigate plains which are unlimited in their productive power. The sea-coast is equipped with harbors that could accommodate all of the navies of Europe and America. The mountains are rich in gold, silver, and the other useful metals. There are also the great wheat plains, grazing pastures, fruit lands, coffee and rubber plantations, and exhaustless fields of aromatics, spices, and medicinal plants, extensive oil fields, and millions of square miles of buried coal. From the mountains and the rivers could be harnessed power that would turn every wheel of commerce, and provide locomotion, heat, light, and refrigeration for millions of people.

The people of Brazil are a composite of races upon which a marvelous civilization may and will be expanded. A group of Portuguese with sea vision, with romance in their souls, and with adventure in their blood, discovered and explored this paradise coast in the name of their country. They left their progeny among the aborigines, and later among the early settlers. Within a century the restless spirits of the overcrowded and overgoverned countries of western Europe learned of these sunlit coasts and productive lands, and their freedom-loving instincts took them to Brazil. Scots, English, Irish, French, Dutch, and Germans and many of the inhabitants of sunny Italy made the voyage and were absorbed by the warm-blooded early comers, and they have developed a people of character and strength in which is commingled the blood of all nations. They are not merely the warm-blooded

WOOD-BURNING ENGINE ON ROAD FROM SANTOS TO GUARUJÁ

easy-going Portuguese with all of their culture and romance, but they are the best of these with the practicability and strength of body and character of hardy Europe, all moulded into harmony by a tropical climate.

And now the value of civilization, with its scientific methods, has been recognized by these people. Without sanitary methods, the productivity of the tropics would be defeated and progress among the most hardy people would be discouraged. Disease and pestilence would abound in the tropics were it not for the application of preventive and curative measures offered by modern science and medicine. The Brazilian civilization has recognized this and has redeemed the border of its great area to health and safety and transformed the dreaded pestilential regions to health resorts for all peoples. When this is gradually extended, when the people learn the rules of health and in their added strength conquer the jungle, then Brazil will become a magnified Santos, São Paulo, and Rio de Janeiro.

With this will come the use of great power plants, the development of roads, the illumination of cities, the refrigeration of the heated areas, and the heating of the cold places. It will mean the production of food that can be spared, of coal and

oil that can be spared, of lumber—hardwood and soft —that can be spared, of gold, silver, copper, iron, and other metals that can be spared; it will mean the development of a great commerce that will export this spare material to all parts of the world.

This nation is builded on romance, culture, and adventure, mellowed by a tropical sun, supplemented and aided by the labors of the hardy, freedom loving pioneers, with a love of beauty in their souls, a pride of heritage in their blood, and a realization of their responsibility to their God. They sought the right to possess the fruits of their labors, and started the development of a country that has possibilities that are well nigh infinite.

And these are the people who were our hosts, and whom we have learned to love.

MONTEVIDEO TO SANTOS

AFTER a strenuous but most interesting week on shore, the prospect of three days at sea, between Montevideo and Santos, is most welcome. There are the long deck walks, and the sea is always smooth and blue, with a delightful breeze blowing and an agreeable temperature.

SANTOS

MARCH 12. Land reported in sight. Directly ahead of us appeared early in the morning a number of mountain-hills which resemble the old conventional bee-hive, cone-shaped, with rounded apex. Between two of these, which

MULE-DRAWN CARTS ON HARD SAND BEACH, GUARUJÁ

stand like sentinels, we steered our ship and passed in among a group of them ranging in height from one thousand to two thousand feet. Their dome-like tops appeared rocky and bare, but their bases were covered with a wealth of green. We were soon following an opening which wound about between the hills like a broad river, and discovered very shortly that this inland passage was the important harbor of Santos, the greatest coffee export market of the world. As we drifted into the harbor through its narrow approach, we passed lighthouses, little hamlets with red tile roofs, and for the first time viewed a wealth of tropical growth that thoroughly satisfied us. It met the standard of the conventional ideas gained from description and pictures. Lofty royal palms projected above and lent dignity to a mass of feathery green foliage, in which were great trees covered with a purple, azalea-like bloom, and a riot of colors produced by other unfamiliar trees and growth.

We came to anchor off modern docks like those at Colon, and at noon were conveyed by tender to the shore where a little narrow-gauge train with an observation coach attached awaited us. We were whisked across the island, and arrived at Guarujá, a suburb of Santos, located across a neck of land on a famous ocean beach. Here we were agreeably surprised to find a thoroughly up-to-date hotel facing directly upon the ocean. It was fairyland, and here one could stay a month, if one had the leisure, and be content. The large rooms of

BEACH SCENE AT GUARUJÁ

SANTOS HARBOR

the hotel, with balconies overlooking the sea, with great white waves breaking on the long sand-beach and cool breezes fanning the tropical heat to a delicious temperature, demonstrated why Guarujá is a favorite spot for the summer sojourn of the society of São Paulo and Rio de Janeiro. Immediately in front of the hotel, half a mile out in the sea, were two cone-like mountain islands between which rolled the open Atlantic. The curved beach, a mile in length, is hard, and over it one may ride in little two-wheel, mule-drawn carts, driven by small boys who easily entice one to make the delightful experiment. Between the hotel and the beach is an unusually attractive park, and behind the hotel, with broad, well paved roads, lies the little village. The houses were originally of white stucco, with red tile roofs. In this climate they have assumed many colors. Before each little home is a fenced-in garden full of green and bloom. Back of it all is a range of bald-topped, green-based hills, literally packed with the greenest jungle, and everywhere in great blotches and in satisfying blendings are flowers of many colors. But after our strenuous journey, to sit on our balcony, to hear the ocean break, to bathe in its surf, and to walk about the fairy streets, gave us a life-time of pleasure. At evening in the west, in a notch between the black hills, as if to entice one from the sea, hung the crescent-shaped new moon, following the glow of

THE BAY, SANTOS

the setting sun. The tropics was in our blood, and we could not help reveling in its beauty.

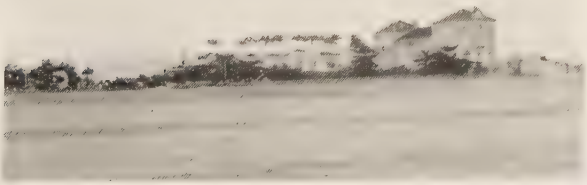
March 13. After assembling for our departure, we were delighted to find ourselves booked for an automobile ride from Guarujá back to Santos, ten miles away. The drive was over a fine road, our machines were modern, and our drivers were well trained. Our course at first was through a thick jungle, with a road just wide enough for the passage of one car. Above us and about us were banana trees, royal palms, and an impenetrable tangle of vines and foliage, and everywhere every color of blooming flower. At intervals little tunnels had been cut into the jungle, producing paths which led away to some hut, some telegraph pole, or other necessary terminal. The walls of these tunnels demonstrated the impenetrability of a real tropical jungle.

We arrived at Santos, after crossing a neck of the sea on a primitive cable-drawn ferry that accommodated four machines at a time. Our second surprise was a drive of ten miles or more on a long, curving beach, almost as hard as asphalt. In many places here on the sea side portion of Santos, where there are stately residences and hotels, were groups of bath houses on wheels, and every convenience for surf bathing. In the sea itself were a number of islands of different sizes, some mere rocks projecting above the water, and some the usual thumb-like hills rising high into the sky. All along the shore the natives were in the surf, and everywhere, accom-

panied by nurse girls, were the children of the residents, wading, with their little legs bared, or splashing about in miniature bathing suits. Our drive of the morning took us through the suburbs—São Vincente, José Minino, Bogueirão, and Praia Grande, points of interest representing old landmarks. All too soon we drove through Santos, a business city of about one hundred thousand inhabitants, which contains many beautiful homes. Later we had a delicious luncheon at one of the fine hotels on the Santos beach, and at two o'clock we were driven to the station to take a train for São Paulo.

SANTOS TO SÃO PAULO

THE trip to São Paulo requires little more than two hours of time. It will become, when known by travelers, one of the scenic marvels of the universe as it is now by reputation an engineering wonder. Many years ago a concession to build this railroad was granted to a foreign syndicate. The syndicate agreed to a provision which required that anything over a reasonable percentage of profit should revert to the state. Inasmuch as this railroad is the principal outlet of the great coffee-growing district of Brazil, the profits have been enormous, and the operating company has spent as much of the surplus as possible in improving the property. Besides a double track road bed which runs over the original right of way, a second double track road for heavy traffic has been built, paralleling the original at a short distance. The road-bed is wonderfully constructed and the rolling stock is of the



SANTOS

best. The engine that carried us over a portion of our route was like a beautiful Swiss watch; the metal portions were polished like silver; and the artistic beauty of its cab and boiler excited our admiration. All culverts and sluice-ways on this mountain road (and there are many such) are generously and artistically constructed from stone and the surface is painted a glossy black. These water-ways include gutters on either side of the road bed, and in many places they extend high above the track on the mountain side and far below into the valley. The stations, switch houses, and all equipment are most extravagant but substantial in character.

After leaving the flat country near the coast, there is a steep elevation of the road which carries it within a short distance to an altitude of several thousand feet, São Paulo being approximately three thousand feet above Santos. For the short, steep climb of a few miles, a cog road is employed, a cable traction being the form of conveyance. Great care and skill are required in handling the traffic, as the trains are attached to the cable in such a manner that the up and down going trains can pass only at the "switches." The coast line of hills is rapidly ascended, and the views of the valley of Santos, of the harbor below, and of the scenes that develop in the rapid climb are most thrilling. A succession of round-

RAILWAY, SANTOS TO SÃO PAULO

topped mountains with their interesting valleys is rapidly passed in review as this climb, which requires only a portion of an hour, is accomplished. On this day there were frequent showers and the mountain tops were at times covered with clouds; but the scene was fortunately not obscured by the mist. Above and below us was the deep tropical jungle with its mass of green, its trees of azaleas of glorious pink, and a startling yellow bloom of a broomcorn nature. Everywhere spots of less vivid color heightened the effect of the green, dripping in the mist and rain. The clouds came and went and the mountains and valleys were constantly changed in light and shade. Occasionally the sun broke through the mist and threw enchantment into deep valleys or onto the mountain sides. The rain filled the waterways and almost constantly our trestle bridges were spanning cascades that came from far above and dashed into the valleys as far below. Everywhere ribbons of water came tumbling down from some height to disappear in mist as they dashed upon the precipitate sides of the mountains. As a fitting climax to our trip, when we reached the heights the sun broke through and painted a rainbow in the valley that was far below us, and encouraged our

CATHOLIC CATHEDRAL, SÃO PAULO

superstitious minds to account it a good omen for our visit to Brazil.

After completing our steep climb, we coupled on real engines and sped many miles over a comfortably level country that might have been Wisconsin or Michigan, except for the occasional palm trees. In many places cattle were grazing on these plains.

SÃO PAULO

WE reached São Paulo at about five o'clock. In its suburbs, through several of which we passed, there was an appearance of newness that reminded us of the approaches to our own western manufacturing towns. Many of the buildings were of red brick, of modern construction with acres of glass skylights, demonstrating the rapid and recent growth of the city. São Paulo is a city of six hundred thousand inhabitants, and it is enjoying a boom growth. As we approached the old city proper it showed signs of substantial construction of long standing, having the appearance of the old cities of Spain.

We were met by automobiles, and as it was Sunday afternoon, were taken immediately for a drive on the principal

MUNICIPAL THEATER, SÃO PAULO

boulevards where the people promenade and drive and look upon each other on this day of rest and recreation. This gave us a most favorable impression of the residences of the wealthier people and a delightful bird's-eye view of the city in its holiday array. We then drove to our hotel, the Palace, and were prepared to enjoy our stay in this Chicago of the southern republic.

Snake Farm at Butantan

MARCH 14. We visited the government snake farm. This is located about ten miles from São Paulo, and is reached by a fine automobile road which traverses interesting suburbs. The Instituto Butantan encompasses everything belonging to serum-therapy, including the making of anti-toxins for the bites of venomous snakes. The sera which are sold are depended upon by the inhabitants of Brazil and are furnished to all civilized countries to prevent fatalities from the bites of venomous snakes. The institution is commodiously housed in several imposing buildings and is well manned by scientists who are instructors to a considerable class of students. In fenced-in enclosures there is a great variety of reptiles of all sizes, shapes and dispositions. These enclosures

VIADUCT AND SÃO JOSÉ THEATER, SÃO PAULO

INSTITUTO BUTANTAN

are presided over by attendants who in addition to their ordinary apparel wear thick shoes, leather leggings and gauntlets. The attendants prod the snakes with a rod or staff an inch in diameter and several feet long, which has on its end an iron wire hook. The spectator stands outside of the closely woven wire fence and looks on in perfect safety while the attendant irritates the great reptiles with the hook end of his baton, drags them out of their beehive-like houses and tantalizes them to show fight. In one enclosure there were large trees in which the attendant would stir up some knob-like mass on a limb above him, hook up a great, struggling reptile and skillfully bring him to the earth. It is a creepy business and by the time we left this institution nearly everybody was on the verge of delirium tremens.

In the laboratory in which the sera are made the work of the institution was demonstrated to us and we gained a notion of the familiarity with which the laboratory workers associate with their victims. Nearby was a pharmaceutical laboratory where quinine and other alkaloids and Brazilian drugs are prepared and tested.

SNAKE HIVES AT INSTITUTO BUTANTAN

Government Coffee Plantation, Campiñas

MARCH 16. After a two-hour train ride through the hills and valleys of the State of São Paulo, we visited a typical coffee district at Campiñas, and inspected a plantation belonging to the government. We lunched in a shady glen in a public park where in the out-of-doors, under an arch of thickest foliage, we showed our appreciation of food and drink. The method of growing and harvesting coffee was explained to us by one of our new found friends who is familiar with that industry as he was born and brought up in a coffee district two hours farther inland.

At one o'clock, after a long morning, we again lunched with our friends at the Automobile Club. Then we packed our trunks, and at nine o'clock in the evening were conveyed to the railroad station, where our train stood ready for its start to Rio de Janeiro. Many of the members of the Faculty of Medicine, some of them with their wives, were there to see us off. Our compartment was filled with flowers and we were overwhelmed by the cordial, warm-hearted adieus of our delightful friends.

MARCH 18. The light of day came, and knowing that we were soon to descend from our three-thousand-foot altitude to the sea level through a mountainous country we were ready to take our early coffee and be transferred to a comfortable observation coach. We followed a river one hundred feet wide, and at frequent intervals dashed through small cities and hamlets that showed prosperity and resembled towns of a small size in France—except that here there is a much richer growth of foliage. At five o'clock in the morning groups of men were at work in a field, cultivating some crop. The midday heat seems to bring out the workers of the day in the cool hours of the early morning and at the twilight hour of the afternoon.

We began to pick our way through rugged hills along a circuitous route and were soon in a distinctly mountainous country. The scene became more interesting and beautiful as we dropped from one fertile tropical valley into another. Later we caught glimpses of the ocean with an abundance of the same dome-topped mountains that we had noted before. Finally the five distinct finger-like mountains, called the "Fingers of God," appeared, indicating that we were approaching Rio de Janeiro. The suburban towns multiplied and became more important. For long distances we ran beside

AUTOMOBILE CLUB, SÃO PAULO

stretches of beautiful roads which were lined on either side by the most decorative tree of all—the stately royal palm, until at last we found ourselves in the real city.

Reception Committee

IN the confusion of arriving at the station, it was announced to us that a reception committee was there to greet us. We met and were introduced to the doctors. They had two automobiles in which to drive us to our hotel. All members of the committee spoke a little English, but it was apparent that Mrs. Martin's French was more acceptable and understandable than our English.

At four o'clock one of our new found friends came with his automobile and took us for a ride. It was a well chosen itinerary as it gave us at the outset a definite bird's-eye view of Rio de Janeiro. We skirted the sea-front boulevard and had a splendid view of the land-locked bay and harbor; of Sugar Loaf, the famous guardian island-mountain, of Corcovado, the lookout mountain; while in every direction other landmarks were pointed out, the names of which at that time meant nothing to us, but the realities of which filled us with wonder. At the end of the bay boulevard, where all seemed to end in a

GOVERNMENT COFFEE PLANTATION, CAMPIÑAS

BOTAFOGO BAY, SUGAR LOAF, AND COPACABANA

mountain pass, we suddenly penetrated the mountain by tunnel and came out into sunshine and beauty on the ocean front. Here was a small city of beautiful residences overlooking a half circular beach of whitest sand, where surf was rolling in in mountainous waves. Above the beach was a boulevard of asphalt with a protecting wall, and bordering that a row of palatial summer homes. One end of this beach and boulevard, carrying the unpronounceable name of Copacabana, is terminated by the mountains guarding the bay, and at the southern and eastern end by a point of land on which is an important fortification. At this farther end, the boulevard continues through an opening in the town and enters upon another boulevard that follows the ocean in another curved beach that runs almost at right angles to Copacabana and terminates two miles farther on at another mountain promontory which projects into the ocean. On this beach, called Ipanema, are located the English Country Club and some very attractive homes. To the landward side of this beach, extending almost to the boulevard that skirts it, is a beautiful fresh water lake of three or four square miles.

Our ride on the sea shore on this occasion ended at the mountain end of the beach, and we returned to the city by

passing around the rear of the fresh-water lake and entering Rio de Janeiro through one of the mountain passes that gave us a glimpse of pretentious homes. Finally we passed the old palace which formerly housed the Emperors of Brazil, and drove down a famous lane of royal palms which extends to the main approach to the palace. Our ride ended at the bay boulevard, Botafogo. We had received a wonderful impression of a city that has a hundred attractions, each one of which one is desirous of knowing in detail. Our guide was one whom we could follow with confidence and with enthusiasm.

Then, that we might be prepared to enjoy the city to the full, we saw a motion picture that had been taken from an aeroplane. It was a wonderful production, and under the guidance of our friend we received an impression of beautiful Rio de Janeiro that we could never have gotten in any other way.

As we sat on the roof garden of our hotel that evening in a flood of moonlight, with a delightful summer temperature, with the city lights all around us, it began to dawn upon us that the extravagant things that we had heard about this southern paradise were attempts to describe the indescribable.

March 19. The weather, which we expected to be extremely warm, surprised us by its coolness and by the delightful sea breeze.

BASKET-CAR TO SUGAR LOAF

Dr. Bowman C. Crowell, an eminent American pathologist, who was at that time stationed at the Oswaldo Cruz Institute (now an Associate Director of the American College of Surgeons), called and during our conversation gave us valuable information about the institutions of Rio de Janeiro. At eleven o'clock I paid my respects to our Ambassador, Mr. Edwin V. Morgan.

The Bay

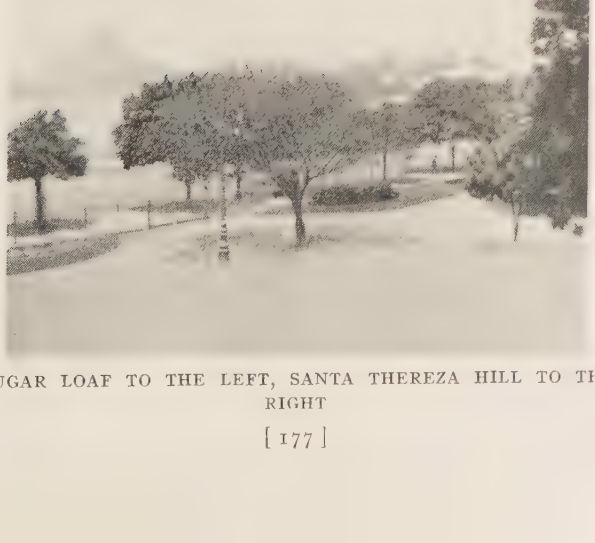
MARCH 20. The beautiful bay was named the "River of January" by the Portuguese sailors who first discovered it in the month of January. They erred in their belief that they were at the mouth of a great river. The city of Rio de Janeiro is strewn helter-skelter in the valleys between the mountains. The charm of Naples and Madeira is here magnified a hundred times. Besides being beautiful, the city is clean. On all sides it is bathed by ocean bayous. The many mountains among which the city lies are covered with virgin forests. The water wends its way from the mountains and is pure and soft. In a comfortable steam launch we made a trip out by Sugar Loaf to the south, east to the entrance to the harbor, and along the sentinel islands that separate the Atlantic Ocean from the bay. We traversed the shore line to the north until nearly the entire bay had been circumnavi-

ENGLISH COUNTRY CLUB

gated. From our launch we could get a perspective of the city with its irregular water line, its docks, its projections and indentations, its mountain background, its hills, and its characteristic buildings of many colors. It rained during a part of our excursion, but that only emphasized the greenness of the foliage which is so rich everywhere, and added to the mystery of the many valleys and coves of the shore line. We returned to the city at three o'clock. It was Palm Sunday, and in all of our lives we had never known a day that was more appropriately named.

March 21. After a busy morning spent at the Oswaldo Cruz Institute, we drove back to the city and incidentally made a detour that gave us for the first time a view of the elaborate docking facilities that the government has constructed in improving its harbor. The docks are modern, with elaborate machinery for loading and unloading and great storage warehouses flanked by a broad, well-paved drive or approach that will extend for miles along the coast.

We then drove to the American Embassy where I had an appointment with Mr. Morgan, our Ambassador. He invited



SUGAR LOAF TO THE LEFT, SANTA THEREZA HILL TO THE RIGHT

us, with our wives, to luncheon with him at his summer residence in Petropolis, at which time he was endeavoring to arrange for me an audience with the President of Brazil, who also has his summer palace in Petropolis. I found Mr. Morgan sympathetic to the Gorgas memorial plan, as he, like all Brazilian residents, had seen a practical demonstration of the application of the principles employed by Gorgas in stamping out tropical diseases.

March 22. After a day of rest, we took a long beach drive. The temperature was delightful — about 75° F. In fact, in our first week we had experienced none of the oppressive heat that we have in our northern summers.

Sugar Loaf Mountain (Pão d'Assucar)

MARCH 23. We took automobiles to the entrance gate for the ride to Sugar Loaf, a conical-shaped mountain which towers over the bay. The trip to its summit is made in two stages, from the base to a companion mountain, about two-thirds the height of Sugar Loaf, called Penedo da Urca, where one disembarks, traverses the top of this way station, and takes the long, final trip to the top of the real mountain. The vehicle of transportation is a small basket-like car, accommodating twenty passengers, which is suspended in midair on huge cables, and on them carried from one mountain height to

AVENIDA RIO BRANCO, MONROE PALACE IN THE DISTANCE

AVENIDA BEIRA-MAR

the other. Viewed from a distance this aerial flight appears to be a very perilous undertaking; but the reality furnishes a novel but unterrifying experience. When we reached our first station, we were concerned to see the higher second peak covered by a cloud. As we proceeded, however, it disappeared, and we were rewarded by a sunlit view of the bay, the city, the amphitheater-like mountains back of the city, and the great ocean to the east and south. The tropical jungle that lies between the two mountains is a most interesting sight when viewed from above. It has a beauty of color and a feathery-like softness of appearance that fairly tempts one to jump into it.

In the evening a courteous friend took us with our wives for a drive. He pursued, at the beginning, the same route that we had taken on the day of our arrival — the shore boulevard, through the tunnel to Copacabana, with its circular beach, along the beach at Ipanema, past the Country Club, to the terminus on the south at the mountain-like promontory projecting into the sea. Here we found that this wonderful boulevard continues for many miles on the sides of the cliffs bordering the ocean. This road is lighted by electricity and is a great engineering accomplishment. Presently the real object of our ride was revealed. We were asked to look back from the

RIO DE JANEIRO FROM CORCOVADO

heights. There below us were the two wonderful beaches, stretching for miles, with the white foam of the surf gleaming on the broad stretch of sand. The skirting boulevard was made conspicuous by the great string of electric lights which transformed the whole scene into fairyland and gave to it the appearance of necklaces of gold and jewels. We feasted upon this ever-changing scene as we retraced our mountain road and wondered if we had ever before seen anything so beautiful.

Corcovado—Paineiras—The Aqueduct

MARCH 24. This day we visited Corcovado. The mountain is reached by cog railroad and has on its peak a pavilion which overlooks the city and surroundings. From this vantage point one gets not only a superb bird's eye view of the bay of Rio de Janeiro and of the city itself, but of its relation to the surrounding country, its several summer suburbs with their extensive ocean beaches, and also of the mountain landmarks among which this is one of the most conspicuous. On arriving at the summit, we were enveloped in a dense cloud. Our disappointment was reaching the point of despair when slowly, as through the screen of the cinematograph

FOUNTAIN, ORIGINALLY SOURCE OF WATER SUPPLY IN RIO DE JANEIRO

away below us we discerned in the brilliant sunlight the ocean beaches of Copacabana and Ipanema. Turning we had a faint view of the city proper and its bay and shipping. Then a cloud enveloped us and the view disappeared. This was repeated several times, and finally the view was shut out not to be again revealed.

The ride down the mountain side through its tunnel of green jungle, with the many glimpses one received of the valleys below, was as pleasing as the complete view to be had from the height on a clear day. Nowhere about Rio de Janeiro can one view the jungle to as good advantage as on this ride. Here are depths and heights and the impenetrable tropical tangle undisturbed. Here are the purple and the yellow trees, the masses of vines and shrubs, the songs of birds, the high note of the many insects, and often against the green of the mountain the wonderful butterflies.

Part way down the mountain we emerged into the sunlight with clouds and shadows of clouds around us, and stopped at Paineiras, a halting place, where a station and a restaurant mark the route of an ancient aqueduct that was built three hundred years ago to furnish water for Rio de Janeiro. The aqueduct is constructed of solid masonry and now, after three hundred years, is in perfect repair with a stream of pure moun-

tain water flowing swiftly in the trough at its top. Paralleling the duct is a level path along the mountain side that one may follow for miles. It is buried under an arch of green, but at intervals openings between the foliage enable the pedestrian following its meanderings to get charming glimpses of the valley below. Many times in the seclusion of this place highly colored paroquets and sporting monkeys appear, although we were not fortunate enough on this occasion to see these signs of the real jungle. However, one cannot walk by this ancient aqueduct in the cool shade and listen to the song of its running water without being fascinated with it all. In this place, and in the mood of the tropical jungle, we lunched and satisfied the hunger of the body.

Santa Thereza Hill—São Silvestre

MARCH 25. Passed a quiet day that was utilized in a ride by tram to the International Hotel, located on Santa Thereza Hill, and on to São Silvestre, a terminal on the Corcovado road. The tram takes one along the route of the old aqueduct which in many places at this height has been de-

MUNICIPAL THEATER

stroyed to furnish material for the construction of the road. On the approach to this hill and on its terraces are many of the picturesque homes of the people of Rio de Janeiro. Here, hundreds of feet above the bay, they have beautiful views, stirring cool air, and the silence of the country.

The Alleluia

IN the afternoon we explored the city, which is an ever increasing source of pleasure, and in the evening were the observers of a ball at our hotel celebrating the Alleluia. This is an annual event of importance on the eve of Easter Sunday at which time the populace gives vent to rejoicing at the end of Lent. The ball afforded us an opportunity to watch the smart set of the society of Rio de Janeiro, aided by adventurous strangers from all the world, disport themselves in gala array and festive mood. There were many lights, much music, much dining and dancing on the out-of door roof garden, lasting until the small hours of the morning. Through the eyes of our American young people, the Brazilian style of dancing appeared rather strenuous; but it was evident that the example of numbers prevailed, and before morning they had become apt imitators in the acrobatic struggle.

March 27. Easter Sunday. Clear and cool. Mrs. Martin and I attended the Cathedral where mass was being said by

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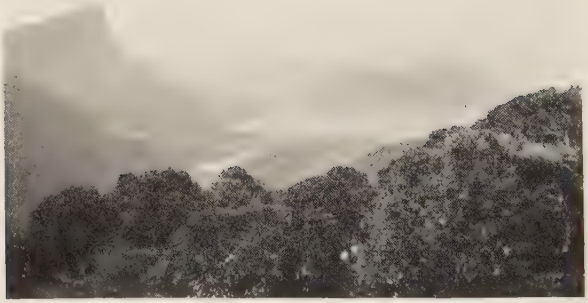

CORCOVADO TO THE LEFT, RODRIGO LAKE TO THE RIGHT

the Cardinal. Although we are not Catholics we found the service most impressive and interesting.

At five o'clock one of our friends drove us to his home to take tea. The house is on the Santa Thereza Hill and has an extensive view. We received a most cordial greeting from our host, Dr. de Mendonça, and met several Brazilian friends. There was some conversation in French, Portuguese, Spanish, and English, and good music by the daughter of our host who played the violin with the skill of a professional. Dr. de Castro asked me if I was fond of music, and when I replied in the affirmative he asked me if I sang, or played some instrument. Of course, I had to admit that I had no technical knowledge of music; but in turn I asked him if he was a practical musician. He admitted that he was passionately fond of music, played the piano for his own gratification, but was shy about performing before others. Finally he was prevailed upon to play. This distinguished professor of neurology modestly proceeded to the piano and with great skill and delicacy of touch played several delightful numbers, including a well-known Chopin Prelude, and excited the envy and admiration of his American auditors.

We inspected the extensive library of our host, comprising medical and general literature in Portuguese, French, English,

PAVILION AT TOP OF CORCOVADO

and German, all languages which he reads. We drank tea and enjoyed the delightful hospitality of a Brazilian home.

Tijuca

MARCH 28. Tijuca! a name that excites the memory and the imagination of every visitor to Rio de Janeiro. While it is the name of a mountain, it calls to mind a marvelous circular drive through Alto da Bôa Vista, Vista Chineza, Meza de Imperador, Gavea Mountain, the sea cliff road, Leblon, and a return trip by the famous beach boulevards through Leme, Copacabana and Ipanema. At nine o'clock on a beautiful morning like one of our own in June, we started in comfortable motors with reliable guides and chauffeurs to take this drive. No description can do justice to this excursion. In it are packed all of the thrills and panoramas of Rio de Janeiro, a marvel of mountain sides, impassable heights, impenetrable jungles, fascinating bridle paths, and astonishing water falls which seem to come from the very skies, cascades, and bridal veils of mists.

At one point high on the mountain we emerged upon a promontory, and there below us was the many-colored city of Rio de Janeiro, the great harbor, and in a small gap between

two island hills the Atlantic Ocean stretching on to Africa. In the great unfrequented valley below was a riot of color in the feathery green depths, and to the right and left near us towered impassable rugged peaks of mountains. At another window in this highway we saw far below the ocean beaches of Copacabana, Ipanema, and Leblon. They are like wonderfully executed maps; the outlines are so pleasing and symmetrical and the coloring is so unobtrusive and satisfying. For miles we continued to and fro, up and down, and around sharp turns, and all of the time we marveled at the engineering feat that wrought this roadway which we enjoyed with perfect security.

Finally, at the bottom of a valley that has the appearance of "Hell's Half Acre" because of the confusion of monster boulders that have been thrown there in some remote convulsion of nature in the beginning of things, and that have been clothed in their nakedness by the green mantle of the tropics, we stopped under one of these boulders, propped up by several others, and spread and ate our luncheon. Near by was a rushing brook of clear water that reminded us of the trout streams of northern Wisconsin.

PRESIDENT'S SUMMER PALACE, PETROPOLIS

PETROPOLIS, AMERICAN SUMMER EMBASSY AT RIGHT

Then we motored home over the cliff road by the side of the Atlantic under the brow of Gavea, and by the Country Club where some of us stopped for a plunge in the tank or a frolic in the surf. It was an excursion that left one confused by its many revelations and anxious to spend a lifetime in admiring it in detail.

Sugar Loaf (Pão d'Assucar) at Twilight

MARCH 31. Visited Sugar Loaf (Pão d'Assucar) at twilight to see the sunset and the lighting of the city and bay. The sun sank in the west behind a curtain of mountains and a bank of clouds and sent a parting glory of yellow and red high into the heavens. All about us were the city, the bay, the mountains, the beaches, and to the east the ocean. The colors rapidly disappeared in the tropical twilight, and, indistinctly at first, appeared the lights of the city. Then rows on rows of lights, like ropes of diamonds, were flashed on, and the picture was a map outlined in gold. Ships sent out their beacons, and far away at sea light-houses flashed their signals to the night traveler on the deep. And everywhere the picture was duplicated in the waters. We quietly watched these changes,

AMBASSADOR EDWIN V. MORGAN AND GROUP

wrought by man, and the eternal lights that dotted the heavens above us.

Petropolis

APRIL 2. Petropolis. The evening before we had received a telephone message from Mr. Morgan, our American Ambassador, which stated that he had arranged an audience for me with the President of Brazil, and invited me, with Dr. Watkins and the ladies, to luncheon with him at the Embassy in Petropolis; afterwards he would accompany me on my visit to the Executive Mansion. Petropolis is a city of summer homes for the society of Rio de Janeiro and the government officials, including the official home of the President. It is also the site of the summer homes of the various ambassadors to Brazil. It is situated in the mountains, at an altitude of several thousand feet, about two hours out of Rio de Janeiro, and is reached by railroad. For a part of the way the steep climb is made by cog road. The scenery along the railroad is most interesting and

FRESH WATER CANAL, PETROPOLIS

would become world-famed if it had not to compete with the environment of Rio de Janeiro.

On arriving at Petropolis we took a drive about the interesting city. It is peculiar in that it has wide streets through the center of which, dividing them into two roadways, runs an open canal thirty to forty feet in width, through which flows pure water from the mountains. These canals are bridged at the street intersections and are bordered with trees.

At 12:30 we arrived at the Ambassador's residence, and were cordially greeted. Mr. Morgan, a charming bachelor, has been the Ambassador to Brazil for nine years [now fifteen years], having been appointed during President Taft's administration. He is very popular with the Brazilians and they are extremely anxious that he shall remain with them. He seems equally fond of them having learned their language and become one of them. Mrs. Benton, the mother of a Secretary at the Embassy, was hostess this day, and we had an interesting and delightful luncheon.

At two o'clock the Ambassador accompanied me to the "White House," which is located in the grounds adjoining Mr. Morgan's attractive residence. The Secretary to the President was a Brazilian naval officer who during the war was a naval attaché in the Brazilian Embassy at Washington.

While in Washington he lived at The Highlands, and knew, admired and loved General Gorgas, who was his neighbor. As my object in visiting the President was to interest him in a proposed memorial to General Gorgas, I considered that it presaged well for my mission to have the sympathy of this influential attaché who is so near to the Executive.

Mr. Morgan accompanied me when the President received me. The President rose from his chair which was next to a table at the end of a long room that might have been the cabinet room, greeted us cordially, and conducted us to chairs. He is a man of medium height, bronzed skin, keen, brilliant eyes, dark, bushy hair, and an agreeable and attractive personality. He speaks English fluently. I related my story about the Gorgas memorial, and fortunately was able to illustrate the value of the memorial that I proposed by the example of the Oswaldo Cruz Institute which is supported by his own government, and by the work that the Institute is doing under the directorship of Dr. Chagas. I also took the occasion to congratulate him on his sympathetic support of their medical school, and to call his attention to the great need of the school for a clinical hospital. He asked a number of questions, showed a genuine interest in my mission, and was apparently much pleased by my appreciation of their medical institutions.

TENNIS CLUB, PETROPOLIS

FISH VENDOR, PETROPOLIS

As we were leaving, he called the Ambassador to him and told him, with apparent elation, that he had just received from President Wilson a personal letter in his own handwriting, thanking him for some expressions of appreciation in regard to Mr. Wilson and his great work that he had uttered in an interview. President Epitacio Pessôa was the Brazilian representative at the Peace Conference in Paris, and had known President Wilson there.

We then returned to the Ambassador's home, spent half an hour in the beautiful grounds, took some snap shots as souvenirs, and made our adieus after a very happy and delightful day.

The American Chamber of Commerce

AT noon we were guests of the American Chamber of Commerce of Rio de Janeiro at the Restaurant Assyrio. This luncheon was given in honor of the members of the American Express Company's party. About two hundred men were in attendance and it was an attractive function. Dr. Watkins was one of the speakers.

In the evening Dr. Watkins and I were guests at a banquet given at the Hotel Central by a group of the medical men of Rio de Janeiro. Among the local medical men present were Drs. de Castro, Chagas, de Mendonça, Ramos, Couto, Vaz, Clark, Fonseca, Leas, Marinho and others. Dr. de Mendonça presided at the social function which followed the banquet and read an address to the guests. The banquet was given as a courtesy to the representatives of the American College of Surgeons. I responded in behalf of the College and thanked the profession of Rio de Janeiro for the cordial reception they had given us. I explained the reason of the visit of Dr. Mayo and myself in 1920, and of my return visit with Dr. Watkins, and in behalf of the College, invited the surgeons of Brazil to visit our country. I spoke particularly of the broad culture of the South American surgeons and our realization that the medical men of South America were not satisfied with their own immediate environment alone and were not content to remain provincial, but that they insist upon taking supplementary courses of graduate instruction in England, France, or Germany; that this presupposes the knowledge on the part of the South American doctor of at least one language besides his own, and frequently of two or three foreign languages; that the South American surgeon is, therefore, a world's man,

OX-DRAWN HAY-RACK

a cultured man, and not of the too commercial type; that we found the members of his family to be linguists; that they have traveled, and that they are highly cultured; that the average South American surgeon—in his knowledge of the world, and in his professional information—is probably far in advance of the average of his professional brethren in the United States and Canada; that Dr. Mayo and I had found in South America some of the best hospitals in the world; that we had observed some of their surgeons at their work and had admired it, and that we hoped all of this would cement a closer relationship between the surgeons of the two Americas; that our problems are different, and only by a friendly interchange of opinion can we view things from the same standpoint; that many of our surgeons of North America are desirous of visiting South America and of learning from the surgeons of the southern continent; and, in turn, that we wish to have the surgeons of South America visit the United States and Canada.

I closed my remarks by congratulating the surgeons of Rio de Janeiro, the metropolis and capital city of Brazil, because they had established but one medical school. I urged them as men in authority to combine in their Faculty of Medicine all

WATER ISLAND, HARBOR OF RIO DE JANEIRO

EMPEROR'S PALACE, NOW A MUSEUM

of the strong men in order to prevent the development of factional groups, which would scatter the efforts of the profession by fruitless competition.

Interesting Days

MRS. MARTIN and I decided to take another trip to Corcovado. We went by the São Silvestre tram and climbed from there to Paineiras by cog. On the terrace of the hotel, overlooking the sea in the direction of the Country Club, we had our luncheon and feasted our eyes. After walking a mile by the old aqueduct, we went to the top of Corcovado. In this instance it was cloudless.

On the same day we were guests at the Rio de Janeiro Athletic Club, the Fluminense. It is a club of great beauty at the mountain base in the fashionable residence portion of the city, adjoining the Emperor's old palace, the grounds of which portions of it overlook. It contains a foot-ball field, tennis courts, buildings with billiard and card rooms, dining rooms, ball rooms, libraries, and bowling alleys. There is also a large swimming pool, with a canopy top and balconies for spectators. Fresh salt-water from the sea is constantly pumped into the great tile-lined tank.

At eight-thirty in the evening our party of five dined with Ambassador Morgan at the Country Club. There were sixteen

at dinner. Mr. Morgan is an ideal host and is to be envied in his position. He has gathered about himself a delightful court from the English speaking colony and is equally popular in native circles.

April 8. We had dinner with Dr. and Mrs. Pyles at the Jockey Club. The Crowells, Mr. Gade, the Norwegian Ambassador, and his wife and a number of others were present. Our host on this occasion, Dr. Pyles, was born in Brazil, but received his education in the United States. His father was a Virginian who migrated to Brazil with a number of southerners after our Civil War.

EMBARKING ON THE SS. *VAUBAN*

APRIL 9. With sadness and regret, we came to the end of our holiday that had had so much of profit and pleasure in it. We were driven to the SS. *Vauban* at noon, preparatory to sailing at four o'clock, but prior to this, that our last day might be punctuated by the business in hand, we went with Dr. Clark to witness an operation by Dr. de Mendonça for nephrectomy under local anæsthesia. Everything passed off according to schedule, and we were more than ever filled with

JOCKEY CLUB

admiration for the graciousness and skill of this great Brazilian surgeon.

At two o'clock, as we looked out from the deck of the ship, a group of our Brazilian friends appeared, and in the arms of the ladies and the chauffeur were great bouquets of flowers for our ladies which fairly filled our staterooms. Mr. Morgan brought us magazines, and several of the doctors came to say adieu.

The bell tolled, final good-byes were said, and the curtain slowly descended on a great scene of a great drama.

RUA PAYSSANDU, FROM EMPEROR'S PALACE

CHAPTER XXIII

GENERAL

OUR HOSTS OF SOUTH AMERICA

HE Panama Canal has brought the western coast of South America—Lima, Valparaiso, etc.—within fourteen days of New York City, Chicago, or New Orleans, and Rio de Janeiro is but twelve days from New York by the faster boats. With a return to normal shipping conditions and a growing acquaintance with our Latin American people, a merchant marine, by mutual agreement, will soon develop that will make us the closest neighbors. And one needs to visit these countries but once to appreciate the great worth and charm of these neighbors.

We were privileged to make our visit under exceptional circumstances. We were practically official guests; but in the busy times we had an opportunity of sitting at the home tables and getting an insight into Latin American family life. Everywhere we were charmed. The young men and women, the sons and daughters of our hosts, were interesting to study. A premium is placed upon education, a knowledge of the languages, and experience gained in foreign travel. The cultivation of the finer graces is encouraged. The study of art, literature, and music of the highest quality is pursued, and a knowledge of the finer arts is considered essential to good breeding. The young women cultivate their music, and on a number of occasions we were thoroughly entertained by the daughters of the families playing with unusual skill the classics of Chopin, Liszt, and other composers with thorough ease and enjoyment. The young men are ambitious, and all of the young men and women have either spent a year or two in European travel, or are planning to do so. In their preparation for such travel, they have almost invariably learned English and French. And while in the past they have looked almost exclusively to Europe as their travel ground, they are now

talking of America, and this spirit of friendliness and appreciation for the United States is materializing rapidly and nothing will develop their attitude more than visits by us to their countries. We must lay aside our provincial airs and cocksureness, and be willing to broaden out as they have done, learn their language as they have learned ours, and make ourselves worthy of a cosmopolitan friendship.

SURVIVAL OF THE FITTEST

HOW little do we know of the people of the southern continent! We were accustomed to think of them as the inhabitants of a number of small republics which would compare in area to so many of the states of our own country. In our ignorance we considered them, of necessity, more or less provincial. Our idea is now changed. Instead of being provincial in their attitude toward life, we found the peoples of South America to be the broadest and most cosmopolitan in the world. And why shouldn't they be? The continent of South America, including the Central American states, was the first to be explored by European countries. Take Peru as an example and review for a moment its history. It had an ancient civilization that antedated by several centuries the discovery of America. This race was overrun, and after a prolonged struggle it was conquered by armies of Spain, led by the most competent adventurers. With the subjugation of the Incas, the Europeans intermarried with this strong race of natives, and for four hundred years this melting-pot has been fed by the men and women of vision and adventure of Europe —Spain, England, France, Italy, Germany, and Holland — and from it has emerged a strong nation of self-reliant Peruvians, which represents the survival of the fittest of centuries of evolution.

And that is how they appear! They are of strong physique, self reliant in attitude, their strength of character predominates, and they are ambitious for self-education; they are not satisfied to retain a local outlook; they are not as we are prone to be — selfish in our preparation for intercourse with the world; they, most of them, know and cultivate at least two continental languages besides their own; they seek a classical education at home and supplement this with world travel and study abroad; they are people of strong temperament and broad vision, and they are interesting in their social intercourse with each other and with the strangers within their midst who are properly vouched for. And here, in a country that is a paradise

of beauty, a wonderful people is pursuing its life, conscious of its worth, and with a world experience that compares favorably with the best of its continental confrères.

And what applies to Peru is equally true of the other Latin American countries, which have had similar experiences, similar conquests, similar European emigration, similar yearning for independence; fertile land, mountains that are filled with minerals, and a climate that attracts the lovers of life; these are the ingredients of a melting-pot that has evolved a new people in a new civilization that cannot longer remain unrevealed.

No one can visit our southern continent, if he travels in comfort, and view the mountains, the valleys, the rivers, and the plains of its vast area, know and converse and live with its fascinating people, and experience the thrill of its stimulating and agreeable climate, and not say to himself: "I shall go again."

IMPORTANCE OF STANDPOINT

DR. MAYO, as we all know, is the philosopher of practical surgery. We may not have thought of him as a philosopher-poet, but on a number of occasions on this remarkable trip of ours the claws of practicality were padded, and in the purple atmosphere of the southern continent the poet emerged. "In coming to South America," he said to the Secretary of State of Uruguay, "we have succeeded in changing our standpoint. In our northern continent we live under the Polestar, and our whole view is from the standpoint of the northern heavens. Now we have visited and viewed for the first time the heavens of the Southern Cross, and with this experience our range of vision has been broadened and the expanse of our standpoint has been doubled. In the future, America will mean to us all-America, including that under the Polestar, and no less that under the Southern Cross."

After visiting a few of these wonderful countries, the United States grows smaller in one's estimation, and the only way we can keep it big is to be willing to broaden out as citizens. Many representatives of the medical profession of Latin America will visit the United States in the next few months and years. Let us look to our laurels! Remember that they have hospitals which are equal to our best, and most of them are much more attractive. Remember that each of their principal countries has a national medical university as thoroughly equipped as are our own, with world-trained faculties, and a seven-year curriculum as compared with our four and five-year courses. Remember that the man you are entertain-

ing has not been satisfied with the advantages afforded by his own country, but that he has also observed the best in France and in Germany. Remember that you are associating with a man from a country where a classical education is the prerequisite of a gentleman. The United States now has the opportunity to enter into competition with the countries of the world as a medical-educational center. There is but one way to make good, and that is to utilize our great resources to the fullest extent and to do it with the realization that we are only one of the many nations which possess unusual resources. If it is possible, let us cultivate modesty, and the best way to do that, and certainly a pleasant way, is to visit Latin America.

It has often been said that an anti North American feeling exists in Latin America, and many regrettable incidents have occurred that would foster such a feeling, if it existed. In racial tendencies, South America has always had a pro-European feeling, that is a sympathetic feeling for the South European countries, France, Spain, Portugal, and Italy, which is quite natural. This should not be interpreted as anti North American. For years men of science from these countries have studied in Europe and have acquired a natural sentiment toward things European, and a bond of friendship exists with its people. It comes partly from the interchange and partly from a love for the motherland. Had we the same understanding of the South American, our association and friendly relations would increase from our propinquity.

If there is one virtue that the North American acquires when he meets and learns to know his Latin-American colleague, it is humility. Contact with the men of science of the southland, men who are cultured and refined, who find time for the arts, are linguists and travelers, who in their profession are serious and progressive and after all still have time for play, makes us feel our littleness, our limitations. Whatever it may be, we certainly have missed a lot of the good things of life through the improper proportioning of our study hours. We usually think of the Latin American as a person of impulse. To jump at conclusions is left for northern blood. The Latin reaches his decisions by deliberation and analysis. His wit is as keen and his humor as deep as the Gael, but his impulsiveness is his passion and is revealed only in love and war. To know the South American is to appreciate a warm friend and to love him.

In summing up his views on the South American countries, Dr. W. J. Mayo said:

"In trying to account for the underlying causes of the present undercurrent of unfriendliness in South America to the United States, it should be remembered that American business interests have sent emissaries to South America for the purpose of establishing trade relations that would be profitable to the United States without much regard for the manner in which the South Americans would be affected, and we certainly have been very patronizing when we have talked about the Monroe Doctrine. Fortunately, our government has men of the highest diplomatic standing representing us in South America, gentlemen who are highly respected and are doing everything possible to promote a better understanding.

"Many evidences are now apparent of a new spirit in our business relations with South America. Today the great American business firms are establishing South American branches and view the trade question not only from the standpoint of the United States, but also from the standpoint of fairness to South America, with the idea of developing her resources. American methods and American labor-saving machinery are rapidly being introduced in the building of docks, railroads, and industries. An example of this was shown in building the railroads in Chile. Mr. Wenceslao Sierra, one of the great railroad builders of Chile, was anxious to introduce American methods, but his people said: 'We have thousands of laborers who work cheap. We do not need to consider labor.' They did not see that the price for a ton of food would be much greater than that for coal to produce the same amount of energy, and that even if people worked for nothing, much of the work could be done cheaper by machinery. Mr. Sierra came to the United States and bought steam shovels and dump cars; he secured a sufficient number of skilled technicians to operate them and returned to Chile. He completed his work in advance of the specified date, and the profits on time contracts alone ran into millions of dollars.

"The American motor car is seen everywhere in South America. Henry Ford may not be a great historian, but he certainly has done more than any other man for the effective transportation of the individual, for the building of good roads, for contentment and prosperity in the rural districts, and in South America, for the improvement of the somewhat dubious reputation of the American square deal, as related to one hundred cents of worth for the dollar invested. Reliable American concerns, such as the General Electric, United States Steel, American Express, Baldwin, and American Locomotive, Pullman, Swift, Wilson, and Armour, are gradually building

up the confidence of the South American public. Large American banks, for example, the National City Bank of New York and the Boston National Bank, are establishing South American branches and a system of credit satisfactory to the merchants of South America. The genius of the American people lies in their ability to develop the natural resources of a country, and South America is the land of opportunity.

"It is to be feared that the average young American, as an individual, will not have a great opportunity in South America. The exceptional man will have opportunities; but the projects to be undertaken are so vast and require such enormous capital that they can be handled only by large moneyed interests, and these must be managed by empire building men of the type of the late James J. Hill. Times in South America will be troublous for years to come; for that matter, they will be troublous in North America; but we have a great middle class which holds the balance of power and renders our institutions safe. When South America introduced compulsory education, aristocracy was doomed. People can not become educated and remain contentedly in poverty and squalor. The safety of any country lies in the development of a contented middle class. The so-called radical party, through politics, has gained many much talked of rights, but as yet acknowledges few if any duties. Labor in South America is rapidly becoming as laborless as in other countries.

"Our reception in South America by the medical profession, the people and the government officials was everywhere most cordial. The organization we represented, the American College of Surgeons, is based on principles that appeal to the Latin Americans, as they do to all right-thinking, unprejudiced men. Preliminary steps were taken to render this organization Pan-American, and the success of our mission was most inspiring.

"The Latin races have high ideals and are inspired by that which appeals to their imagination. When approached on this ground they are most cordial and ready to reciprocate freely, but the United States has not heretofore approached the people of South America in this spirit. North America can appeal to South America if the appeal is based on altruism, but the present supercilious attitude must be discarded and an honest perspective of the South American people and their ideals obtained.

"In a study of the characteristics of the people of North America and South America great differences will be found,

since the cultured, intelligent class, white or largely white, in South America is small, while the ignorant Indian class is extremely large. Unfortunately, up to the present time there has been almost no middle class in South America, although such a class is in the process of development. In the large cities primary education, while not compulsory, is extensive. In Brazil the primary schooling is three years; in Peru, Chile, Argentina and Uruguay it is from five to six years. The difficulties of general education outside the cities, where the estates are very large and the population scanty, are not easily overcome.

"The course of education in the secondary schools is six years, but these secondary schools are limited in number. In the various countries in South America Spanish or Portuguese is generally spoken by the cultured class. French and English are next most extensively spoken. In most of the secondary schools English is taught, at least as an elective study.

"Persons intending to go south would do well to learn Spanish; a knowledge of this language will also enable them to communicate with people who speak Portuguese. Spanish is easily learned and the vocabulary is relatively small. When the vast possibilities of South America, which are equal to those of North America fifty years ago, are considered, and it is realized that South America at the present time is as yet underdeveloped and underpopulated, no prophet is needed to foretell that Spanish will be a very useful language to the North American; it should be taught generally in our public schools.

"Whatever may be our after-war duty in Europe, about which there is so much difference of opinion, there can be no difference of opinion with regard to the necessity of the establishment of friendly relations with the great and growing republics of South America. In some parts of South America the spirit of friendliness toward North America does not exist. There has been a tendency for North Americans to go to South America for the purpose of exploiting the country, and without extending to the inhabitants even common politeness. Germany, England and France have vouched for the goods their merchants sent to South America, and the South Americans have not been prepared to combat the principle of 'buyer beware' which appears to have been the motto of at least some North-American business firms who have been developing South America into a dumping ground for inferior goods."

RETROSPECT

THE foregoing chapters have been written after several visits to the Latin American countries. Some one in Argentina asked me why I came back. Some one in Brazil has asked me if I shall return to that country. One visits these countries for the first time in a spirit of adventure, because one has in one's vision great countries in our own southern continent where new things will be found, where new beauties will be appreciated, and where a people of a new world will be building a new empire upon a prehistoric empire; where the Southern Cross will give a new standpoint from that of the Polestar, and where one can spend a profitable holiday away from the snow and frost of home, in a land of warmth and sunshine.

One makes subsequent visits to these countries not in a spirit of adventure and exploration but in a spirit of friendship friendship for their civilization; friendship for a people of old Portugal and Spain, recreated by decades of transition on the lands of a southern America to a strong race of loving, competent people; friendship for a people who take time to be polite, to gain culture, to cultivate the arts, and to learn the languages of the world. One comes to get relief from the sordid hustle and bustle of a too practical country, and to drink in some of the wine of repose and vision that is possessed by these Americans of the South.

And so, life being spared, we will come again and again. When we are away in our own great land and at our work, we shall profit by our memories of the artistic people of the land of sunshine, and shall know that we have friends with warm hearts and glad eyes waiting to give us the hearty handclasp of welcome another year. We will come because we admire their great countries and because we have learned to love their people.

PART II

THE AMERICAN COLLEGE OF SURGEONS AND ITS RELATION TO THE LATIN-AMERICAN COUNTRIES

THE AMERICAN COLLEGE OF SURGEONS AND ITS RELATION TO THE LATIN-AMERICAN COUNTRIES

THE American College of Surgeons is a society of surgeons of North and South America which aims to include within its Fellowship all who are of worthy character and who possess a practical knowledge of the science and art of surgery. The College is concerned fundamentally with matters of character and of training, with the betterment of hospitals and of teaching facilities in medical schools and hospitals, with laws which relate to medical practice and privilege, with research, and with an unselfish protection of the public from incompetent medical service.

Since the inception of the College, its organizers have had in mind that it should become comprehensively American, and eventually include in its Fellowship all worthy surgeons of the American continents.

Toward this end, a preliminary correspondence with the surgeons of South America was entered into during 1914 and 1915 by the officers of the College, under the guidance of a special Spanish-speaking Secretary who conducted the correspondence in Spanish. This was undertaken as a precursor of a visit that was to have been made in the winter of 1915–16. The European War, which was threatening the usefulness and safety of the shipping routes of the Western Hemisphere coupled with our own interest in the conflict, compelled us to postpone further thought of an immediate visit to the southern continent.

Upon the signing of the Armistice, it became apparent that, with the educational institutions of Europe disorganized and European travel discouraged, the time was particularly opportune for the revival of our plans to visit the surgeons of the various countries of our own South America.

The suggestion came almost simultaneously from our President, Dr. William J. Mayo, and several members of the Board of Regents of the College, and with an assurance on the part of the President that he personally would make the trip, our

correspondence was hurriedly revived, travel arrangements promptly made, and January 7 set as the time for our departure in 1920.

On December 20, 1919, the Director-General laid the tentative plans before the Board of Regents and they were received with hearty approval. As a preliminary, committees of surgeons in Panama, Peru, Chile, Argentina, and Uruguay were selected, and we communicated to the individual members of each committee the principal objects of our contemplated visit, which were to learn at first hand of the splendid work and methods of their men of science and to enlist the interest of the surgical profession of their countries in the American College of Surgeons, with the idea of extending ultimately to the surgeons of Latin America an invitation to become Fellows of the College. In the five countries visited, our reception was most flattering and cordial. The surgeons with whom we had corresponded were ready and anxious to co-operate with us in our desire to bring about an affiliation through the College between the professions of the two continents of the Western Hemisphere. A concrete result of our visit was revealed by the fact that thirty-five South American surgeons were received into Fellowship at the 1920 Convocation of the College at Montreal.

In February, 1921, Dr. Thomas J. Watkins and the Director-General revisited Panama, Peru, Chile, Argentina, and Uruguay, and added to the itinerary Rio de Janeiro and São Paulo in Brazil. Also, in January and February, 1921, Dr. Francis P. Corrigan, of Cleveland, Ohio, visited the Republics of Ecuador and Bolivia as an official representative of the College.

Official visits were made during the winter of 1922, by Dr. Edward I. Salisbury, of Denver, Colorado, to Colombia, Venezuela, and Cuba; and by Dr. Francis P. Corrigan, of Cleveland, to Brazil, Uruguay, Argentina, Chile, Peru, and Panama.

In the early months of 1922, Dr. Albert J. Ochsner, then President-elect of the College, and Dr. William J. Mayo, an ex-President, visited some of the larger cities of Mexico, and enlisted interest in the College.

The SS. *Vandyck*, of the Lamport and Holt Lines, was chartered in the winter of 1922-23 for a South American cruise of Fellows of the American College of Surgeons. Representatives of the College from thirty-five states of the United States and five provinces of Canada visited Cuba, Panama, Colombia, Venezuela, Brazil, Uruguay, Argentina, Chile, and Peru. Of these Fellows, eleven were Founders of the College, nine Gov-

ernors, one Regent, and a Vice-President of the College who had been appointed Acting President for the period of the cruise. Official receptions were tendered to the members of the cruise party by the Presidents of all countries whose capitals were visited, and formal meetings of the College were held in Rio de Janeiro, Buenos Aires, and Montevideo. Meetings were held in each country of the respective Committee on Credentials. Everywhere the spirit of professional brotherhood was manifested by the unlimited hospitality, courtesy and kindness which was shown to the Fellows of the College from North America by their southern confrères.

During 1924, an official visit was made to Cuba, Guatemala, El Salvador, Nicaragua, Costa Rica, Panama, Bolivia, Peru, Dominican Republic, Porto Rico, and Venezuela, and Credentials Committees were selected in those places newly visited and meetings held of the committees previously created. Seventeen Latin-American states are now represented in the College, each having its Committee on Credentials.

Dr. James T. Case, of Battle Creek, Michigan, represented the College at the third Pan American Scientific Congress, held in Lima, Peru, in December, 1924. He presented the Hospital Standardization program of the College, and its Minimum Standard which reads as follows:

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word STAFF is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."
2. That membership upon the staff be restricted to physicians and surgeons who are (a) full graduates of medicine in good standing and legally licensed to practice in their respective states or provinces, (b) competent in their respective fields, and (c) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.
3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the

professional work of the hospital; that these rules, regulations, and policies specifically provide:

(a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)

(b) That the staff review and analyze at regular intervals their clinical experience in the various departments of the hospital, such as medicine, surgery, obstetrics, and the other specialties; the clinical records of patients, free and pay, to be the basis for such reviews and analyses.

4. That accurate and complete records be written for all patients and filed in an accessible manner in the hospital—a complete case record being one which includes identification data; complaint; personal and family history; history of present illness; physical examination; special examinations, such as consultations, clinical laboratory, X-ray and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings.
5. That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis, and treatment of patients, these to include, at least (a) a clinical laboratory providing chemical, bacteriological, serological, and pathological services; (b) an X-ray department providing radiographic and fluoroscopic services.

At the request of Dr. Iribarne, of Buenos Aires, Argentina, the Scientific Congress passed a motion that the program of hospital standardization of the American College of Surgeons, as outlined by Dr. Case, should have the full approval of the Section on Medicine and Sanitation, and that the Congress as a whole give a vote of approval and request all the governments represented to set in motion at once means of accomplishing similar work. The motion was passed unanimously by this section, and also by the Third Pan American Scientific Congress at its closing session.

In 1925, Dr. Salisbury visited Brazil, Uruguay, Argentina, Chile, Peru, and Panama, and held Credentials Committee meetings in the principal cities of each of these countries.

It is contemplated that the countries of the Americas with which we do not have an affiliation at the present time shall be visited at as early a date as possible in order that the College may be truly American in its scope.

The story of all of these visits, and the friendships we have created, are of deep interest not only to the members of the medical profession of our countries, but as well to the men of broad vision in the Department of State and Foreign Relations of the United States, whose principal object it is to maintain a sympathetic friendship between the Governments.

In extending Fellowship to Latin-American surgeons, we have had the most hearty co-operation of the American governments, of their diplomatic representatives in Washington, of the Pan American Union, and of the Department of State. A number of surgeons were sent from Latin America to the Philadelphia, Boston, Chicago, and New York Convocations as official representatives of their respective countries.

The Honorary Fellowship of the College has been conferred upon some of the leading Latin-American surgeons, including:

João Alves de Lima, São Paulo, Brazil
*Miguel H. Alcivar, Guayaquil, Ecuador
Gregorio Amunátegui, Santiago, Chile
José Arce, Buenos Aires, Argentina
Augusto S. Boyd, Panama, Republic of Panama
Rafael Calvo, C., Cartagena, Colombia
José E. Casuso, Havana, Cuba
Olympio da Fonseca, Rio de Janeiro, Brazil
José de Mendonça, Rio de Janeiro, Brazil
Guillermo Gastañeta, Lima, Peru
Marcelino Herrera Vegas, Buenos Aires, Argentina
Guillermo E. Münnich, Valparaiso, Chile
Enrique Pouey, Montevideo, Uruguay
José A. Presno y Bastiony, Havana, Cuba
Luis Razetti, Caracas, Venezuela
Ulises Valdés, Mexico City, Mexico

Because of the ruling established by the Board of Regents that Honorary Fellowships shall not be conferred *in absentia*, several distinguished Latin-American surgeons who were selected for the honorary degree will receive it at a future Convocation.

*Deceased.

To date Fellowships in the College have been conferred upon 265 Latin-American surgeons as follows: Prior to 1920, seven; at the Convocation in Montreal, 1920, thirty-five; in Philadelphia, 1921, fifty-five; Boston, 1922, thirty-three; Chicago, 1923, forty-three; New York, 1924, thirty; Philadelphia, 1925, sixty-two; and Montreal, 1926, five. The list follows:

ARGENTINA

Buenos Aires
- Nicomedes Antelo
- Pedro Belou
- Guillermo Bosch Arana
- Carlos Alberto Castaño
- Alejandro Ceballos
- Robert E. Halahan
- Oscar Ivanissevich
- Carlos Robertson Lavalle
- Salvador A. Marino
- Frank Ricardo Pasman
- Rodolfo E. Pasman
- Pedro del Pino
- Alberto Peralto Ramos
- Carlos Mario Squirru
- Luis A. Tamini
- Guillermo Zorraguin

Córdoba
- Pablo Luis Mirizzi

Rosario
- Artemio Zeno

BOLIVIA

Cochabamba
- Aurelio Melean

La Paz
- Daniel Bilbao R.
- Renato A. Riverin
- Claudio Sanjines F.
- Felix Veintemillas

Potosi
- Enrique Loup Bustillo

BRAZIL

Bahía
- Fernando Luz

Bello Horizonte
- Hugo F. Werneck

Pelotas
- Edmundo Berchon des Essarts

Porto Alegre
- Alfeu Bica de Medeiros
- *Arthur Franco de Souza

Ribeirao Preto
- Francisco Antonio Pompeo de Camargo

Rio de Janeiro
- José Antonio de Abreu Fialho
- Armando Aguinaga
- Tito Barbosa de Araujo
- Benjamin Baptista
- Raul Baptista
- Lafayette Rodrigues de Barros
- Paulo de Valladão Gomes Brandão
- Clovis Corrêa da Costa
- Manoel Corrêa da Veiga
- Eugenio Decourt
- Pedro Ernesto
- Ernani de Faria Alves
- Rodolpho Josetti
- Fernando Augusto Ribeiro de Magalhães
- Francisco de Castilho Marcondes
- João Marinho de Azevedo
- Pedro Mario de Moura
- Pedro Paulo de Paes Carvalho
- Octavio Oliveira Pinto
- Jayme Poggi de Figueirêdo

*Deceased.

RIO DE JANEIRO—*Continued*
Franklin P. Pyles
*Alvaro P. de A. Ramos
Estevam Monteiro de Rezende
Carlos Jorge Rohr
Augusto P. Soares de Souza
Octavio de Souza
Fernando Vaz

SÃO PAULO
Luiz Felippe Baeta Neves
José Barbosa de Barros
Joäo Paulo de Cruz Britto
Antonio Candido de Camargo
Lauriston Job Lane
Henrique Lindenberg
Sergio de Paiva Meira Filho
Erich Miller Carioba
Benedicto Montenegro
Nicolau de Moraes Barros
Mario Ottoni de Rezende
Luiz de Rezende Puech
Adolfo Schmidt Sarmento
Antonio Vieira Marcondes

URUGUAYANA
Eugenio C. Sigaud

CANAL ZONE

ANCON
Troy W. Earhart
Howard Knowlton Tuttle

CHILE

SANTIAGO
Italio Alessandrini Iturriaga
Carlos Charlin
Alfonso Constant Barbaris
Eugenio Diaz Lira
Hernan Garcia Huidobro
Francisco Navarro Valenzuela
Caupolican Pardo Correa
Lucas Sierra
Luis Vargas
Alberto Zúñiga
Federico Engelbach Campo
Rudecindo de la Fuente
Hugo Grove
Ernesto Iturrieta V.
Gaston Lachaise
Miguel Manriquez
Pedro Montenegro A.
Edwyn P. Reed
Silvano Sepulveda P.
Jean H. Thierry
*Jerman Valenzuela B.
Stanley Martin Wells
*Julio C. Zilleruelo

VALPARAISO
Alberto Adriasola

COLOMBIA

BOGOTÁ
Juan N. Corpas
J. Vincente Huertas
Lisandro Leyva Pereira
Pompilio Martinez
José M. Montoya
Rafael Ucrós

CARTAGENA
Raul Bernett y Cordova
Nicolás Macario Paz
Rafael A. Muñoz
Manuel F. Obregón

MEDELLÍN
Gil J. Gil
Juan B. Montoya y Flórez

COSTA RICA

ALAJUELA
Julio Aguilar Soto

LIMÓN
Antonio A. Facio

SAN JOSÉ
Vicente Castro Cervantes
*Carlos Duran
Benjamin Hernández
Luis P. Jiménez
José Victory

*Deceased.

CUBA

CARDENAS
- Luis Ros y Pochet

CIENFUEGOS
- Alfredo Mendez y Aguirre

HAVANA
- Ernesto R. de Aragon
- Eduardo R. Arellano
- Gonzalo E. Aróstegui
- Claudio Basterrechea y Ugarte
- Arturo G. Casariego
- Manuel Costales Latatu
- José de Cubas y Serrate
- Gustavo A. Cuervo Rubio
- Enrique Fernandez Soto
- Francisco M. Fernandez
- Charles E. Finlay
- Sergio M. Garcia Marruz
- Nicolas Gomez de Rosas
- Pedro Gonzáles Lequerica
- Alberto Inclan Costa
- Damaso T. Lainé
- Francisco Leza
- Emilio Martinez
- Rafael Menocal
- Santiago Verdeja Neyra
- Rafael Nogueira
- Felix Pagés y Rodriguez
- Gonzalo Pedroso
- Luis F. Rodriguez Molina
- Emilio Romero y Ochandarena
- Elpidio Stincer y González
- Agustin de Varona y González del Valle

PINAR DEL RIO
- León Cuervo Rubio

SANTIAGO DE CUBA
- Donato González Marmol
- Antonio Guernica Comas
- José Antonio Ortis y Rodrigues

DOMINICAN REPUBLIC

SAN PEDRO DE MACORIS
- Francisco E. Moscoso Puello

SANTIAGO
- Mariano Rovellat Canals

SANTO DOMINGO CITY
- Ramon Báez
- Ramon de Lara

ECUADOR

GUAYAQUIL
- Juan B. Arzube Cordero
- Teodoro Maldonado C.
- Juan F. Rubio A.

QUITO
- Isidro Ayora
- Ricardo Villavicencio Ponce

GUATEMALA

GUATEMALA CITY
- Manuel Arroyo
- Alfonso Castellanos
- Guillermo Cruz
- Lizardo Estrada G.
- Arturo Lazo Midence
- Eduardo Lizarralde
- Juan J. Ortega
- Mario J. Wunderlich

MEXICO

IXTLAN
- Seabron Jennings Fuller

MEXICO CITY
- Walter L. Garnett
- William F. Shaw

NICARAGUA

GRANADA
- Juan José Martinez

LEON
- Luis H. Debayle

MANAGUA
- Davide Campari

PERU

AREQUIPA
- Manuel Castañeda

LIMA
- Miguel C. Aljovin
- Eduardo Bello
- Alejandro Bussalleu
- E. Campodónico
- Constantino J. Carvallo
- Agusto Dammert
- Juvenal Denegri
- Enrique Febres y Odriozola
- Francisco Graña
- Cárlos Morales Macedo
- Jorge A. Morrison
- Juan J. Mostajo
- Ricardo Palma
- Ricardo Pazos Varela
- Luis F. de la Puente
- Fortunato Quesada
- Belisario J. Sosa Artola
- Felipe A. de la Torre
- Cárlos Villarán

PORTO RICO

MAYAGUEZ
- Themistocles J. Ramirez

PONCE
- Rafael Lopez Nussa

SAN JUAN
- Jacinto Avilés
- José S. Belaval
- Garry Richman Burke
- William Robert Galbreath
- Walter Ashley Glines
- Nicolas Quiñones Jiménez

SANTURCE
- Jorge del Toro

REPUBLIC OF EL SALVADOR

SAN SALVADOR
- Liberato Dávila
- Guillermo González
- Alfonso Quiñonez Molina

SANTA ANA
- Joaquin Guillen

REPUBLIC OF PANAMA

COLON
- Surse John Taylor

PANAMA
- Alfred B. Herrick
- Dennis Frank Reeder
- Raymond Wentworth Runyan
- Joaquín José Vallarino

URUGUAY

MONTEVIDEO
- Manuel Albo
- Justo M. Alonzo
- Gerardo Arrizabalaga
- Miguel Becerro de Bengoa
- Eduardo Blanco Acevedo
- Luis P. Bottaro
- Baldomero Cuenca y Lamas
- Horacio García Lagos
- José Iraola
- Alfonso Lamas
- Luis Pedro Lenguas
- Eduardo Lorenzo
- Lorenzo Merola
- Luis Mondino
- Juan C. Munyo
- Clivio V. Nario
- Alfredo Navarro
- Julio Nin y Silva
- Alejandro Nogueira
- James Hipolite Oliver
- Prudencio de Pena
- Juan Pou Orfila
- Ernesto Quintela
- Manuel Quintela
- Elias Regules, Jr.
- Mario Rossi
- Francisco Ruvertoni
- Carlos Stajano
- Luis Surraco
- Ernesto Juan Tarigo
- Agusto Turenne

VENEZUELA

CARACAS

Adolfo Bueno M.
Emilio Conde Flores
Salvador Cordoba
José Manuel Espino
*David Lobo
Lisandro Lopez Villoria
Julio C. Rivas Morales
Placido Daniel Rodrìguez Rivero
Miguel R. Ruiz
Henrique Toledo Trujillo

MARACAIBO

Adolfo d'Empaire
Ramón Soto Gonzalez

*Deceased.

PART III

SURGEONS AND MEDICAL INSTITUTIONS OF LATIN AMERICA

SURGEONS AND MEDICAL INSTITUTIONS OF LATIN AMERICA

CHAPTER I

MEXICO

By William J. Mayo, M.D., F.A.C.S.

OWING to political unrest in Mexico, developments in the science of medicine have been retarded and the civic hospitals are consequently in poor condition. In spite of this, excellent work is done in them and is more notable on account of it. Under the administration of President Obregon, General Calles, secretary of state, took up the matter of improving the hospitals. He gave every possible support for the purchase of new equipment, and several fine hospitals were projected. In 1905, President Diaz constructed a very fine hospital of eight hundred beds in Mexico City, on the separated pavilion plan much like the Virchow Hospital in Berlin. The hospital covers a great deal of ground which is beautifully parked. The Military Hospital, with six hundred beds, under the direction of Dr. Francisco Castillo Najera, is a very old structure in the oldest quarter of the city. This is to be replaced by a fine hospital in a beautiful suburb. The Military Hospital provides quarters for the sick wives and children of the soldiers as well as for the soldiers. The hospital staff is excellent, and the work is modern. Dr. Najera is an active, progressive man, and conducts the affairs of the hospital most intelligently. Spinal anæsthesia with cocaine is used very largely, and we were told that in over five thousand cases there had been no direct mortality from it. We witnessed several operations under this anæsthesia, one especially clever for abscess of the lung.

We had an opportunity to visit the private sanitaria of Dr. Ulises Valdes and of Dr. Gabriel M. Malda. The morning we visited Dr. Valdes he performed, among other operations, a subtotal hysterectomy for a large myoma, and I was much pleased to note with what great pains he saved both ovaries.

He tied all knots by the one-forceps method, manipulating with the forceps as dexterously as though they were his fingers the short end of a catgut thread deep down in the pelvis. Dr. Malda performed a very skillful operation in which we were much interested, an amputation of the leg at the point of election just below the knee, after the method of Dr. Monteo de Oca, a distinguished Mexican surgeon of bygone days; this technique probably is unknown outside of Mexico. The amputation was made with mathematical accuracy and the muscles were divided in a manner to give excellent function at the knee for an artificial leg and foot or to permit the use of the peg leg of the natives. Dr. Malda has a number of clever methods for facilitating work, among others a slip-noose that he uses with catgut which allows very expeditious and accurate suturing of deep wounds. I had never seen it before.

One evening while in Mexico City we attended the meeting of the medical society of the city; about fifty doctors were in attendance. The chief paper of the evening was on an urologic subject, illustrated by lantern slides. An interesting paper on yellow fever also was presented. The Rockefeller Foundation, greatly interested in the subject of yellow fever, has worked in conjunction with the Mexican Government for eradication of the disease. The domestic mosquito (*stegomyia calopus*), which carries the disease, lives in clear quiet water, and is always to be found within three hundred feet of a dwelling place, in drinking pools, wells, cisterns, tubs, and so forth. In Mexico this mosquito is not often found above an altitude of three thousand feet. Five per cent infestation of water is considered safe. Top minnows are being used to destroy the larvæ of the mosquitoes. At first the native Indians objected very strongly to having these fish living in their drinking water, but this point of view is being gradually corrected through education. Noguchi's serum has great value in the treatment of the disease, both as a prophylactic and a curative; it is almost certain cure if given within the first three days after the onset of the disease. We had the pleasure of meeting the president of the Yellow Fever Commission of Mexico who has occupied this position for more than twenty years. In Colima, Captain Parks showed us a record of his monthly examinations which included over 11,000 tests, with an incidence of infestation of less than one per cent. This was a surprisingly good record, and the town of Colima is accounted safe. Captain Parks is conducting experiments in breeding fish for destruction of those numerous

forms of mosquito larvae which, unlike the stegomyia, live in quiet but impure water. At the present time he is using thousands of minnows from the streams, but as they are unsuited to this type of life he is attempting to develop the gold fish or carp which for years have been accustomed to dark and stagnant water.

The medical schools in Mexico are connected with the hospitals, and to a great extent the students live in the hospitals. Most of the textbooks used in medical schools are in the French language, and the system of education as well as the method and technique employed in the hospitals and operating rooms is essentially French. Practically every physician speaks French as well as Spanish and most of them have studied in the universities and hospitals of France. We were especially interested in some beautiful slides of the transitional stages of carcinoma in tissues developing cancer, shown us by Professor Gutierrez, chief of the department of pathology of the Medical School of the University of Mexico.

In Guadalajara there is an active body of medical men, and we had the privilege of attending a meeting of the medical association of the city. Dr. Barrios and Dr. Chauvas are among the leading surgeons in the city.

A visit to Mexico in the interest of medicine and surgery will be found most interesting and profitable. One should particularly study the tropical diseases, which more rapid methods of communication will gradually bring to our own people. The medical traveler is received with the greatest kindness by members of the profession, and is accorded every courtesy by officials of the Government. Heretofore many, unfortunately most, Americans who have gone into Mexico have done so for the purpose of commercial exploitation. They have been careless if not rude in their dealings with these sensitive people in whom courtesy is ingrained, and on returning to America they have given their impression, derived from experience with the lower classes. The friendliness and charming hospitality accorded to us in Mexico caused us to leave with regret. In 1910, in company with Dr. Ochsner, as now, I visited Mexico, and I hope to go again in the near future. The relation of the United States with the Latin American countries will in time, when the broader, more intellectual people of both countries know one another better, become one of enduring friendship. Members of the medical profession can do much to promote cordial relations, for science has no country and its adherents meet on common ground. The officers of the American College of Surgeons expect to extend

the membership of the association into Mexico, and there is no doubt that it will do much to cement the growing fellowship and friendship between the people of Mexico and the United States.

CHAPTER II

ISLANDS OF THE CARIBBEAN SEA

By Edward I. Salisbury, M.D., F.A.C.S.

CUBA

HOSPITAL conditions are much better in Cuba than in many countries. The total number of hospital beds in Havana is about six thousand. There are five training schools for nurses in Cuba: two in Havana and one each in Santiago, Camagüey, and Matanzas. The largest city hospital is the Calixto García of about nine hundred beds. It has recently been given to the University of Havana Medical School as a teaching hospital. The total cost of its eighteen buildings when finished will be about $700,000.00. Up to date $400,000.00 has been spent in the construction of ten buildings and their equipment.

The Mercedes Hospital of twelve pavilions, with three hundred beds, has a training school of twenty-five pupil nurses, and employs twenty-eight graduates. The Maternity Hospital is conducted by the Health Department, and it too has a training school. There are six graduate nurses and eight pupils. Eight fourth-year medical students act as internes and assist in over three hundred labors per year. This institution comprises a day nursery, and instructions are given to mothers on infant feeding and care.

The Emergency Hospital has one hundred beds; the Asylum for the Insane, two thousand beds; and the Leprosarium, one hundred beds.

There are eight hospitals in Havana which belong to Spanish Associations. One of these associations has 70,000 members each of whom pays Two Dollars a month and receives free medical and surgical treatment as well as hospitalization. Membership also includes club privileges, and the advantage of courses in bookkeeping, typewriting, languages, mathematics, etc. Many of the associations have outside enterprises, such as theaters, whose earnings are turned into the general fund.

MUNICIPAL HOSPITAL, HAVANA

These associations were formed when Cuba was a Spanish colony. The Spanish emigrant who came to Cuba was always sure to have his attack of yellow fever, and the men of his native province in Spain banded together to give him medical care until he acquired his immunity, or to give him a respectable burial in the event of his death. The associations are usually named after the provinces of Spain, and their hospitals are models of completeness. Covadonga is the Asturian Association hospital, of which Dr. José A. Presno is the chief surgeon. This hospital has beautiful grounds and airy pavilions that accommodate about eight hundred patients. These hospitals are for male patients only, and the nursing is done by men who are trained for the work.

The medical school is a part of the University of Havana. Dr. Diego Tamayo established a dispensary in Havana and in connection with it conducts a post-graduate school in the specialties. The clinic treats about fifteen thousand patients per year, and fills a long-felt need for the poor of the city.

The medical school is poorly housed at present and has only a lecture hall, an anatomy building, and the General Wood Laboratory. The faculty hopes to be able to sell the old grounds and building and place the school within the grounds of the new University Hospital, recently acquired from the Government.

PORTO RICO

THE principal hospitals of San Juan are the Municipal, the Presbyterian, the Spanish, and several private hospitals. In Ponce there is a Municipal Hospital, St. Luke's, and Asilo de las Damas. Each city of any size on the island has its own municipal hospital, several of which were visited. Some of these institutions are extremely well equipped and administered, and have taken steps toward standardization. Complete record systems, training schools for nurses and organized staffs are a part of many of them

DOMINICAN REPUBLIC

THERE are two important hospitals in Santo Domingo, the Padre Bellini and the Military. The administration of the latter has just changed from the jurisdiction of the United States Navy to the local fraternity.

A new hospital is under construction in San Pedro de Marcoris which promises to be modern and well equipped in every detail and has a very representative staff.

CURAÇAO

ST. Elizabeth's Hospital is conducted by nuns of the order of St. Francis from Holland. There are forty-three Sisters, six of whom are trained nurses. The hospital contains two hundred beds and resembles in administration the hospitals of the United States.

PRESBYTERIAN HOSPITAL, SAN JUAN, PORTO RICO

RUINS, HOSPITAL SAN NICOLAS, SANTO DOMINGO

The Green Cross Sanitarium of fifty-bed capacity is also well conducted.

Dr. H. Boogart practices general surgery, Dr. M. Goodhart does ear, nose, and throat work, and Dr. H. Ferguson is an ophthalmologist of great prominence in the countries near by. He is quite expert in cataract extraction and enjoys an enviable reputation.

CHAPTER III

CENTRAL AMERICA

By Edward I. Salisbury, M.D., F.A.C.S.

GUATEMALA

THE principal hospitals of Guatemala are the General Hospital of six hundred beds, the Isolation Hospital of six hundred beds, the Military Hospital of three hundred beds, Leprosarium of twenty-two beds, American Hospital of ten beds, conducted by Presbyterian missions, several asylums for children, the insane and the indigent, a Children's Welfare Station or day nursery, and several small private hospitals. There is also a medical school which has a course of six years, clinical work beginning in the third year.

EL SALVADOR

SAN SALVADOR has several small hospitals, and one large general hospital of eight hundred beds, the Hospital Rosales, whose construction is entirely of steel, with walls of paneled

MILITARY HOSPITAL, GUATEMALA CITY

ROSALES HOSPITAL, SAN SALVADOR

steel or iron sheets. It contains also a section for pay patients. This particular type of construction was brought about as a safety measure against earthquakes.

NICARAGUA

LEON and Granada each has its medical school and hospitals. Managua has a general hospital of about ninety beds and also a railroad hospital of about thirty beds. The latter institution, though small, was doing a definite service for the country in providing modern operating conveniences for the city, and while primarily intended for employes of the railroad, there are private rooms which are open to the public.

COSTA RICA

THE principal hospital in San José is the Hospital de San Juan de Dios, which is under the guidance of a prominent American banker who resides in Costa Rica, Honorable John M. Keith. He was quite anxious to take steps toward the standardization of this hospital.

The Carit Sanitarium for Tuberculosis is located very near to the Volcano of Irazú. The hospital in Cartago is a model institution and well conducted.

At Port Limón there is a hospital, maintained by the United Fruit Company, of which Dr. Antonio Facio is the superintendent and chief surgeon. This hospital is modern in every respect and efficiently conducted by a well organized staff of doctors and nurses.

CHAPTER IV

COLOMBIA

By Edward I. Salisbury, M.D., F.A.C.S.

BOGOTÁ — MEDICAL CENTER

BOGOTÁ has always been a medical center in the New World and today contains the principal school of medicine in the country, a branch of the national university, known as the Faculty of Medicine and Natural Sciences.

The early history of the medical profession in the New World is somewhat obscure; however, some data are available in the old chronicles. The name of García Fernandez is mentioned as the physician who accompanied Columbus on his first voyage to America. Many years after, in 1579, there came to Bogotá to practice medicine the Licentiate Don Alvaro de Auñón, the first *Médico Diplomado* whose name is recorded. In 1630, Dr. Diego Henriquez came from Spain with the title of *Protomédico*, whose commission was to teach medicine and grant licenses for its practice.

The College of Rosario, still existent, was founded in 1640. A chair of medicine was established in this college in 1758 when, after the death of Henriquez, the Viceroy appointed Roman Gancino as *Protomédico*. This school received a royal charter in 1801, and continued to teach until the founding of the Republic, when Congress established the national university with its department of medicine. The school of medicine is well housed in new buildings, some of which are still in course of construction. Its laboratories of anatomy, pathology, bacteriology, and chemistry are up to date in every way, and would be a credit to any school. The College lacks a practical course in physiology and has no such laboratory. The curriculum is planned for six years, and clinical work is given in the last four years.

Hospitals

THE principal hospitals of Bogotá are the San Juan de Dios, Misericordia, and Marley. The first named is the great charity hospital. It is located in the heart of the city and

though it is intended for about three hundred patients, it houses twice the number. The hospital is in the charge of Sisters whose number is somewhat limited, just enough for supervision; hence the nursing system is inadequate.

The Misericordia is the children's hospital and has a capacity of one hundred and twenty beds. Its daily census runs about seventy-five. Here the proportion of Sisters to patients is higher, and more attention is given to nursing.

Marley is a private hospital, but Sisters are paid to supervise it. There are several clinics, or *casas de salud*, owned by individual doctors, some in the care of Sisters, and others under lay women trained for the work. I visited two of these, one under the jurisdiction of Dr. Pompilio Martinez, and the other of Dr. Manuel V. Pena. Both were adequately furnished and modern in every respect. All of the hospital operating rooms are well equipped, and aseptic technique is fully carried out. Another feature that would please the Hospital Standardization Committee of the American College of Surgeons is the complete hospital record system. Complete histories and progress records are kept of all patients. Several of the prominent surgeons performed operations, some difficult cases too, and all showed fine surgical skill and judgment. The new San Juan de Dios Hospital in La Hortua, a suburb, was dedicated in 1922. It is built on the isolated pavilion plan, and will probably accommodate twelve hundred patients when completed. The buildings were originally intended for an insane asylum but the plans were revised and hospital units substituted for the asylum, and a new site for the latter secured in the country.

The surgical society of Bogotá has been constructing a new hospital also, to be known as Hospital San José. It has been under construction for about twelve years, and work is carried on as funds are available. This is a beautiful group of buildings, with large and well ventilated wards and private rooms. The operating rooms or amphitheaters are well equipped with modern apparatus, as are all the wards and departments of the institution.

The Nursing Problem

THE nursing problem is as perplexing in Colombia as in many of the South American republics. Speaking broadly, there are no nurses, and several reasons exist for their absence. In the first place, hospitals were charitable institutions conducted by religious orders, where the halt, the sick, and the aged were given shelter and food and whatever medical

HOSPITAL SAN JOSÉ, BOGOTÁ

care it fell within the skill of the individuals in charge to administer. No one entered save the poor. The better classes called a physician to their homes, where their friends and relatives gathered, stood watch over the sick one, and cared for him. It was a work of love and not a business. Nuns gave their life to it as God's work, not as hirelings.

Another phase developed from an increase in the number of inmates in these hospitals with a corresponding decrease in the proportion of nuns to care for them. To aid them the poor were hired to work in the wards; so nursing became menial labor. In consequence of these two conditions, nursing has not become the profession of merit and the real science as we know it in North America.

A third point held by some is a moral one. It is not considered conducive to good morals for young women to study along medical lines and then go forth to care for strangers. The young women necessary for such work, who are educated and come from good homes, are not free to enter the nursing profession. In fact women do not participate in the affairs of public life.

One of two things will be necessary to place nursing on the basis of a merited profession, and either will bring about the other as well. The people will become educated to the advantages or necessity of hospitalization of all patients, whether rich or poor, in which case the better class will demand nursing; or the public will sense its duty to the sick and develop nursing as a profession, which in turn will elevate the standard of the hospitals, and all patients will seek the protection and advantages of the hospital.

NEW HOSPITAL, CARTAGENA

The medical profession of South America realizes the need for nurses; but it is difficult to bring about the necessary change in the mind of the public to encourage training schools.

Experimental Laboratory

A PRIVATE laboratory in the city is equipped to do all routine tests as well as produce biologic products. They manufacture vaccines, anti-diphtheritic and anti-tetanic sera, and conduct experiments in the prophylaxis of animal diseases. A North American veterinary is attached to the laboratory, and quite elaborate studies are made of anthrax, piroplasmosis, trypanosomiasis, and other infections from which animals suffer.

Typhoid is endemic in Bogotá, and several years ago Dr. Bernardo Samper, and Dr. Jorge Martinez (recently deceased) were introducing typhoid vaccination among the students, firemen, policemen, and soldiers who were stationed there. It was thought that this would be a real test of the efficacy of vaccine, as no particular anti-typhoid sanitary measures were carried out. Accordingly, the statistics of the experiment were perused. Of ten thousand who were vaccinated, eighteen subsequently had typhoid and only one died, whereas of ten thousand of the general population, two hundred had typhoid and twenty died. These last figures are not exact, as only records of deaths are kept, and for each twenty deaths the rate of mortality and incidence in epidemics in the United States were used, whereas the Bogotá rate is really higher. However, the comparison, such as it is, is interesting.

MEDELLIN

MEDELLIN is the capital of the Department of Antioquia. It is a city of 70.000, and progressive. A railroad connects it with the Magdalena River at Puerto Berrio. Dr. Juan B. Montoya y Flores conducts a small private hospital called "Casa de Salud la Samaritana," and Dr. José V. Maldonado is associated with him. There is another *casa de salud* which is managed by Dr. Gil J. Gil and his associate, Dr. Alfonso Castro.

BARRANQUILLA

BARRANQUILLA has several small hospitals or clinics. The Clinica Moderna is operated by a group. La Casa de Salud is the private hospital of Dr. Jorge E. Calvo.

A stock company has started construction of a modern hospital on the Prado in the residential section. It is not the intention to operate for profit, but as a philanthropic work to provide a hospital for the city, with the hope that at least interest on the investment will be earned.

CARTAGENA

CARTAGENA is also a medical center and has a small medical school. Its equipment is rather meager and there is not ample material for clinical study in the small charity hospital. Dr. Rafael Calvo is dean and professor of otology. A company headed by Dr. Calvo has opened a hospital of fifty beds, which is conducted on modern lines. Dr. Kempton Taylor is the chief surgeon, and North American nurses are in charge. The laboratory and X-ray departments have technicians from the States. The Bernett Hospital was organized recently by Dr. Raul Bernett y Cordova.

CHAPTER V

VENEZUELA

By Edward I. Salisbury, M.D., F.A.C.S.

CARACAS

CARACAS, from a sanitary standpoint, is very clean. Venezuela in the past few years built up a most efficient sanitary department through the untiring efforts of the Director of Public Safety (now Director of Hospitals), Dr. L. G. Chacin Itriago. Dr. Itriago is a relative of the Minister of External Relations, Dr. Itriago Chacin. To distinguish them in official circles they are called respectively Dr. Chacin *adelante* and *detrás*, meaning Doctor Chacin (before) and Doctor Chacin (after). The laboratory of the sanitary department is a great institution of research and investigation. Experts conduct the several departments of chemistry, analysis, bacteriology, epidemiology, and pathology. The director is a man of winning personality, a fine executive, and withal a man of science.

Venezuela has several cities of importance, all of which have hospitals: Valencia, with a population of 30,000; Maracaibo, 50,000; Barquisimeto, 25,000; and Ciudad Bolivar, 20,000.

Medical School

IN 1922, the medical school was not functioning, and medical education was carried on by the old system of tutors and preceptors. The young aspirant, after having served his time under his several preceptors was examined and asked to present his thesis. If all was satisfactory, he was granted his license to practice medicine. The faculty was nominally existent and ready for work and the school was re-established in 1923.

Hospitals

THE principal hospital of Caracas is the Hospital Vargas, which received its name from one of the Republic's early physicians and statesmen. Besides many monuments

throughout the republic and having this great hospital named for him, this doctor of medicine has been honored with a resting place in the National Pantheon. Hospital Vargas is conducted by Sisters, and contains about six hundred beds placed in wards that are grouped on the sides of a great open court and connected by open passageways. The space between the ward buildings is beautifully decorated with flower beds and arbors, making delightful spots that the convalescent can always enjoy.

The operating rooms and laboratories are entirely modern in every way, and in them a high class of work is being done, the surgeons using the French technique.

CHAPTER VI

PANAMA

THE government of Panama has constructed an up-to-date six hundred bed hospital in Panama City on the old exposition grounds down by the sea. It has displaced the old Santo Tomas Hospital and is called the New Santo Tomas Hospital. The hospital is thoroughly modern and well administered in every detail. It faces the Pacific Ocean, and directly in front of it, down by the sea-wall, is the beautiful statue of Balboa, who looks out over the ocean. There are also several private hospitals, conducted on the highest scientific plan.

The hospitals in the Canal Zone which have been built and are controlled by the U.S. Government are the last word in scientific construction. The Colon Hospital on the eastern or northern coast and the Ancon Hospital on the western coast accommodate five hundred and eight hundred patients respectively, and afford service not only to those who are connected with the Canal Zone work, but also to private citizens.

The Ancon Hospital was built at a cost of about $2,000,000, and its equipment cost $1,000,000. It occupies an ideal position on Ancon Hill, and overlooks the city below, the administration buiding, and the new Balboa village at the point of entrance. This building with eight hundred beds, which in an emergency can accommodate six hundred more, has a staff of thirty-five physicians, six internes, and approximately one hundred nurses. The superintendent of the hospital is an officer in the Medical Corps of the United States Army.

THE following comments on the Ancon Hospital, made by Dr. W. J. Mayo following our trip in 1920, are of interest:

"The splendid hospital at Ancon, located on the slope of Ancon Hill, in the Canal Zone, was built by the United States Government. It is constructed of brick and cement, and all installations are the best and are up to date. The ordinary capacity of the hospital is 800 beds, but it may accommodate

ANCON HOSPITAL, ANCON, CANAL ZONE

1,400 patients. Pay patients are admitted. The surgeons' fees go into the general fund of the hospital.

"Employes of the government are cared for in the wards free of charge, and in private rooms with a reduction of about 25 per cent from the regular price. There are about eighty registered nurses and a nurses' home, but no training school."

CHAPTER VII

ECUADOR

By Francis P. Corrigan, M.D., F.A.C.S.

THE surgeons of Ecuador are a splendid body of men. In their profession they represent as fine a type as could be the boast of any country; they are advanced in training and methods; men of broad culture and of the gracious and hospitable manners for which cultivated gentlemen of Hispanic-American blood are noted.

QUITO

BEFORE leaving Quito I had the pleasure of visiting the Nuevo Hospital Civil now in course of construction. Dr. Ricardo Villavicencio Ponce acted as my guide and showed me the plans for the finished structure. It is a magnificent plan which calls for the expenditure by the government of about seven millions of dollars, and contemplates a complete hospital with all departments affiliated with the medical division of the University. Dr. Villavicencio, a graduate of the University of Brussels, is professor of surgery in the University. The construction is far enough advanced so that with his aid I was able to get a good idea of the contemplated structure. One of the striking features is a graceful pergola with a slightly curving double row of solid columns supporting a solarium at least a thousand feet in length. The buildings are located on an elevated site so that they overlook the city and face the beautiful Mount Pichincha across the valley. A tunnel is being constructed which will penetrate the knoll on which the hospital stands. This tunnel will pass under all of the buildings and will carry the drainage from the hospital beyond the valley in which the city lies. With its beautiful location and in this wonderful climate it should be a notable institution when it is completed. (1921.)

Another fine institution in Quito is the new Maternidad, a hospital devoted to gynecology and obstetrics. It was organized by its able Director, Dr. Isidro Ayora, who is also

NUEVO HOSPITAL CIVIL, QUITO

professor of gynecology and obstetrics in the University. Dr. Villavicencio and Dr. Ayora are now associated in the expansion of the work of the College in Ecuador and are worthy representatives of their country.

GUAYAQUIL

AS I had arrived between trains, which leave several times a week, I had an opportunity to look around Guayaquil for a few days before starting for the capital. The pleasure of my visit to Ecuador was greatly enhanced by meeting with Dr. Frederick W. Goding, Consul-General of the United States, who has his headquarters in Guayaquil. Dr. Goding is an American physician who was peacefully practicing his profession in Illinois at the time of the Spanish-American war, when the martyred President McKinley's knowledge of his special ability along certain lines precipitated him into government service, first in the Philippines and later in other Spanish-speaking countries. It was undoubtedly a loss to the good people of Illinois, but a gain to the consular service which needs more of the fine type of men represented by Dr. Goding. Along with his official duties he has found time to keep in touch with the world of science, and during the seven years of his stay in Ecuador he has written several monographs

covering original researches made by him on the very interesting insect life of that country.

Through Dr. Goding I had an opportunity to become acquainted with Dr. Juan B. Arzube Cordero, president of the Medical Faculty and professor of gynecology in the local University. My meeting with Dr. Arzube was epochal as he was the first prominent member of the profession of Ecuador with whom I came in contact and his reception of me and my mission would go a long way toward demonstrating what reaction I might expect from the other members of the profession in his country. I need have had no trepidation on this score. Dr. Arzube, a splendid gentleman, would have received me courteously whatever my mission, and as it was he received me with enthusiasm. He repeated in almost as many words what the Prefect of Police had said to me when I went to his office for the formality of recovering my passport: "Your visit, Señor, is one of great significance to the medical profession of our country. It is indeed a grand idea to attempt to unite the surgeons of the two continents into one great organization so that we may profit by interchange of ideas."

Guayaquil is the seat of a university which has a complete medical department with approximately the same number of students as the Central University at Quito, that is to say between eighty and ninety. Dr. Arzube is of the most progressive type, and when he was apprised of the plans and hopes of the officials of the College he became deeply interested and entered into co-operation in the heartiest manner.

The first man to whom he introduced me after my return was Dr. Miguel H. Alcívar (died 1924), the professor of surgery and perhaps the most widely known of the Ecuadorean surgeons both inside and outside of the limits of his own country. His exceptional skill and ability had brought him deserved renown. Dr. Alcívar's visits to the various clinical centers of this country and his friendship and admiration for Dr. William J. Mayo and other prominent North American surgeons whose names had been identified with the organization of the American College of Surgeons made anything that I might say quite unnecessary; he was already a strong advocate of the idea of affiliation.

I am deeply indebted to these courteous gentlemen for their aid in the accomplishment of my mission. They invited me to attend what in their country is called a "breakfast" to be given in my honor at the leading club where I might meet some of the members of the medical profession. The *almuerzo* (or "breakfast" as it is translated) is really a very elaborate

course luncheon which lasts for several hours and is one of the popular methods of entertaining guests in all of the Latin-American countries. This one was served in a beautiful dining-room overlooking the water, the club being located on the Malecón, a street which runs parallel to the water-front.

The men at the luncheon were not all surgeons but they were all interested in the movement of *rapprochement* inaugurated by one of the important North-American scientific bodies. I was struck by the cordiality shown to me on all sides as an American medical man. I was struck also by their familiarity with the names of leaders of the profession in the United States. They made inquiries about the work and personalities of such men as Murphy, the Mayos, Crile, Ochsner, Cushing, and many others. The name of Gorgas is, of course, a household word in Ecuador and the feeling of gratitude engendered in the hearts of these people by the fine work of the sanitarians of the Rockefeller Institute is certainly something of which every American may well feel proud.

I felt a patriotic glow as I talked with these men, some of whom were engaged in carrying on the work that had been started by my countrymen. I realized how much the elimination of yellow fever, for instance, had benefited this city and how the appreciation of that work was now making easier the closer affiliation of our professional life. This conception of mine was strengthened when later I made a tour of the hospitals of Guayaquil. The hospitals of Guayaquil are of the tropical type of construction. They comprise all departments and are in charge of well-trained, competent men. I might say in passing that the development of nurses' training schools is one of the notable things that requires attention. However, the need of a competent nursing body is recognized and steps are being taken to remedy this defect.

In the General Hospital of Guayaquil the ability and reputation of Dr. Juan Rubio have contributed to build up an ophthalmological department that is somewhat out of proportion to the size of the hospital, but which in its completeness and general arrangement gives evidence of the excellence of this talented man. Diseases of the eye seem to be very prevalent in this country, perhaps aggravated by the constant brilliant sunlight. For this reason, perhaps, I found that Dr. Rubio's service in Guayaquil, like that of Dr. Saenz in Quito, was of greater importance than would be the eye service in a university hospital of corresponding size at home.

CHAPTER VIII

PERU

THE SURGEONS

NOWHERE in the world, I am sure, can the modern surgeon find himself more at home than among the surgeons of Peru; they are all men of the highest type; they are educated and possess the culture that comes from travel and study abroad, and they are conversant with at least one language besides their own. Nearly all of them speak French, a large percentage some English, and many of them converse with ease in the English tongue.

When we consider the personnel of these hosts of ours immediately come to mind the following: Dr. Miguel C. Aljovin, surgeon of the Maison de Santé, honorary member of the Faculty of Medicine; Dr. Constantino J. Carvallo, professor of descriptive anatomy; Dr. Juvenal Denegri, professor of otology, rhinology and laryngology, surgeon to Santa Ana Hospital; Dr. Guillermo Gastañeta, professor of clinical surgery, surgeon to Dos de Mayo Hospital; Dr. Francisco Graña, professor of surgical pathology, surgeon to Guadalupe Hospital; Dr. Cárlos Morales Macedo, professor of applied anatomy, surgeon to Guadalupe Hospital; Dr. Cárlos Villarán, professor of clinical surgery, surgeon to Military Hospital; Dr. Mariano Alcedan; Dr. Eduardo Bello, professor of gynecology, Faculty of Medicine; Dr. Manuel J. Castañeda, professor of surgery; Dr. Enrique Febres y Odriozola, professor of obstetrics; Dr. Juan J. Mostajo, surgeon to Italian Hospital; Dr. Ricardo Palma, instructor of anatomy of the Faculty of Medicine; Dr. Ricardo Pazos Varela, professor of genito-urinary surgery, surgeon to Dos de Mayo Hospital; Dr. Luis F. de la Puente, surgeon to Maison de Santé, honorary member of the Faculty of Medicine; Dr. Belisario J. Sosa Artola, professor of syphilis and skin diseases, surgeon to Bellavista Hospital.

"The surgical technique in Lima," said Dr. Mayo, "is far in advance of hospital installation, and the highest praise should be accorded these men for their excellent work, which

is further illustration of the fact that surgical results depend on the surgeon and not on his surroundings. I attended many interesting clinics and saw Dr. Gastañeta, Dr. Aljovin, Dr. Carvallo, Dr. Denegri, Dr. Morales, Dr. Graña and others doing clean, careful and skillful surgery. Physicians qualified to do good roentgen-ray and cystoscopic work are needed in Lima."

Dr. Watkins, in commenting on the doctors of Peru, said: "The doctors, collectively, surpass socially and professionally the doctors in the United States. This is due to the condition of 'caste.' Only members of the aristocracy have sufficient money to study extensively at home and abroad. A college education is required for medical school matriculation. The only medical college in Peru is a department of the national university at Lima, but it is independent in management and finances. The course of study is seven years. Following graduation, most of the doctors serve interneships and take post-graduate study in Europe or the United States, and often in both. As the hospitals have no trained nurses, the medical students do much hospital work. On graduation, they receive the degree of physician and surgeon. Should a position on the medical faculty be desired, a degree of doctor of medicine is required. The Sociedad Peruana de Cirugía has made this one of the requirements for membership in the American College of Surgeons."

SOCIEDAD PERUANA DE CIRUGÍA

THE Sociedad Peruana de Cirugía is of recent origin, and was established along the lines of the successful societies of the United States and Europe. The organizers have had the courage of their convictions and have carefully selected their members. They have built themselves an attractive home in which to meet, to house their literature, and to entertain the stranger. The membership is limited to surgical specialists, and its members do not yet number twenty.

Honorary Fellowships in the Sociedad Peruana de Cirugía were conferred upon Dr. Mayo and myself in 1920 under interesting auspices. The ceremony occurred at the University of San Marcos.

We assembled in the main lecture room of the medical department on the large platform of which were the members of the Sociedad de Cirugía and of the Faculty of Medicine of the university. The president, Dr. Juvenal Denegri, occupied a seat at the center table, with Dr. Mayo and myself at either

side. Flanking us were the members of the Faculty and of the society. In the amphitheater were about two hundred students. The back of the amphitheater opened onto a court filled with tropical plants, palms, and flowers, which could be seen through an attractive colonnade which outlined the assembly hall. The students, a splendid group of young fellows, were in their places when we entered and filed onto the platform. They rose in a body and cheered and applauded for several minutes. It was a reception that was rather stirring, and warmed our hearts to the future medical profession of Peru.

The president read an address of welcome to the two candidates for Honorary Fellowship. In the meantime, we had received copies of the English translation of the address. A second address was read by the secretary of the association, Dr. Francisco Graña. The Honorary Fellowships were then separately conferred by the president, and an engraved parchment certificate presented to each one of us as evidence of this honor.

As Dr. Mayo rose to speak, he received an ovation from the Faculty and students that plainly deeply touched him. It was some time before he was allowed to express his pent-up feelings and to say to them how much we appreciated their great hospitality and especially the honor they had just conferred upon us. He then described the object of our visit to South America. My own talk was received with an enthusiasm that I was at a loss to understand. In responding, the most I could do was to congratulate everybody on something: the splendid body of students for being educated in the oldest university on the Western Hemisphere, in a medical school with a seven-year course; the Faculty for being privileged to teach in the university, with such an attractive student body; Dr. Mayo and myself for being so fortunate as to be privileged to visit this institution and to receive such a reception. The brief talk was suddenly terminated and was followed by the most enthusiastic applause, too much for the conventional and rather commonplace talk. It occurred to me that there was some compensation in being brief and in speaking in an unknown tongue. It transpired, however, that these were not the reasons. It seems there had been quite a partisan controversy in the medical department over the length of the course, viz., the seven-year requirement for a medical degree. This had been discussed pro and con with considerable feeling, and the students were divided into two factions, one opposing the long course and the other upholding it. In congratulating

them on the seven-year course, I had used the sign language, putting up seven fingers to emphasize my speech. Each of the two groups to the controversy interpreted my remarks as favoring its contentions; hence the outbreak. As a matter of fact, Dr. Mayo and I soon found that our talks when brief and least understood were most heartily received.

EDUCATION IN PERU

"SAN MARCOS University in Lima, the oldest on the Western Hemisphere, was founded in 1551. Señor Ngarteche Prado, president of the University, is a talented gracious gentleman, fully equal to the duties devolving on him in the management of this great University, the only one in Peru, with its 4,500,000 inhabitants. The University medical school is also in Lima and is the only one in Peru; it has about 300 students. The spacious buildings are in beautiful grounds. Dissecting material is ample. The laboratories in charge of Dr. Hercelles, professor of bacteriology and pathology, are excellent. There are many unusual and beautifully preserved specimens in the museum of the medical school and in the laboratories. The University impresses one as being in every way a real teaching institution.

"Primary school education, a course of six years, is compulsory in Peru; the secondary course of six years has a limited attendance. The medical student must add to the two courses two years of science and seven years of medicine, making in all nineteen years of study to obtain a medical degree. The exceptional student can reduce this period two years. Medical students are much alike the world over, and one of their great virtues is their independent spirit, with little respect for tradition or authority. To the medical student Thomas must be the greatest of apostles. Our reception at the medical school by the faculty and the students was most impressive and formal." (Extract from comments by Dr. Mayo, 1920.)

THE MEDICAL SCHOOL

"THE medical school occupies several blocks in a desirable part of the city. It is of the Spanish type. There is an administration building and a separate building for each department all one story high. The buildings, which are flush with the sidewalk, surround a garden of tropical vegetation and flowers, and the entrances to the various buildings, except the administration building, are from the garden.

PATIO OF MEDICAL SCHOOL, UNIVERSITY OF SAN MARCOS, LIMA

"The whole aspect of the medical school suggests that our medical schools in the States lack in appreciation of art and of sentiment." (From remarks by Dr. Watkins, 1921.)

HOSPITALS

"PERU has much to interest the medical sightseer. All through South America the hospitals are of Spanish design, excellent for the tropics. They are usually of one story, with high ceilings, large high windows, large porch effects for shade, and surrounded by fine gardens. In Lima are two large charity hospitals. The older, the Hospital de Santa Ana for women and children, boys up to 10 years of age, has a capacity of 300 beds. A large new hospital is now being built to replace this old one, in which the government expects to install American nurses and American methods for caring for patients. One of the greatest innovations will be the introduction of wire screens against flies. Hospital Dos de Mayo for men was founded in commemoration of the victory over the Spanish fleet in Callao, May 2, 1866. The independence of Peru had, however, been declared in 1824. This hospital contains 700 beds and is more modern than the Santa Ana Hospital.

Miss Soper, a trained nurse from London, has been working courageously for four years to develop a nurses' training school and to improve the nursing and hospital conditions generally. The results of her efforts are beginning to show.

"Several cases of verruga, a disease of the skin peculiar to Peru, were seen in one of the wards of this hospital. The disease is found in the higher Andes and is characterized by fever and eruption. The cause is unknown, although it is believed to be the bite of a night insect. Most patients recover, but there are fatal forms, when hæmorrhages occur under the skin, forming pustules.

"Both the Hospital de Santa Ana and the Hospital Dos de Mayo are maintained, as indeed are all municipal charities, from the public charity fund, which is accumulated by private contributions and public amusements.

"The Italians, of whom there are many in Peru, maintain a good hospital, and the French also have a very good hospital of forty beds. There are a number of private hospitals, notably Dr. Febres', which is quite modern in its appointments. Dr. Graña's hospital, with a capacity of 100 beds, now being built on the seashore about 3 miles from Lima, will be the last word in modern construction and equipment. American nurses and a nurses' training school will be installed. There are several excellent hospitals connected with American mines in Peru, with American physicians and nurses." (Comments by Dr. Mayo, 1920.)

"The hospitals are all of the one-story type," said Dr. Watkins in 1921, "and have gardens. The buildings, essentially, face the garden, and are entered from it. The private rooms are best described as stalls, one or two rooms deep, freely open to the garden, with no side window, but with a window in the ceiling.

"The hospitals are well equipped and clean. The nursing is sadly deficient as compared with our hospitals. They have no trained nurses. The condition of 'caste' prohibits members of the aristocracy from entering the profession of nursing. It would be disastrous, socially, and would subject them to the mortification and danger of being considered 'free property.' The other class lacks too much in education and culture for the work.

"We had the opportunity of witnessing one operation. The case was well worked up, including laboratory investigation. The clinical record would be a credit to any hospital. The case was a large hydatid cyst, filling the abdominal cavity. The operative technique was good."

Steps have been taken by our Fellows in Lima toward reaching the Minimum Standard and many innovations have been added to their hospitals. A new hospital to replace Santa Ana Hospital for Women was opened in December, 1924, under the name of Hospital Arzobispo Loayza.

President Leguia is interested in the welfare of his country, and especially in educational and health matters.

The climate of Arequipa is quite similar to that of Denver and as there is very little migration in the cities of the interior portions of Peru, this city shows an unusual freedom from tuberculosis. It has a sanitarium and mineral baths on the outskirts of the city and a well equipped and administered hospital, Goyneche, in the city.

THE *VANDYCK* CRUISE

ON Monday, April 2, 1923, the West Coast party of the cruise arrived in Callao, the port for the capital, Lima. Dr. Juvenal Denegri, Dr. Miguel Aljovin, Dr. Ricardo Palma, and Dr. Alejandro Bussalleu were at the port to extend welcome and accompanied the party to Lima, where in a few short hours they saw most of the interesting sights and visited the hospitals, the university, and the medical school.

The Sociedad Peruana de Cirugía Dr. Aljovin, the president, presiding, entertained at luncheon in the National Club, at which the wives of a number of local surgeons were present. Dr. Aljovin welcomed the North Americans in the name of the surgical society, eulogized the surgeons of the North, their contributions to science, and the admirable organization of northern universities. Dr. Francisco Graña translated the address, Dr. Truman W. Brophy responded, and Dr. William F. Grinstead toasted the surgeons of Peru as representing the culture of the South. Dr. Guillermo Gastañeta asked that a message be carried back to the American College of Surgeons to the effect that the Fellows of Lima were working to bring their hospitals up to the Minimum Standard of the College.

CHAPTER IX

BOLIVIA

By Francis P. Corrigan, M.D., F.A.C.S.

THE hospital situation in La Paz is far from satisfactory. The number of beds is inadequate, a state of affairs with which we are not unfamiliar in this country. The condition, however, is well recognized by the members of the local profession. Many of the present hospital buildings are old and lack modern requisites for a center of this size. The municipality has under construction a new hospital which, when finished, will contain all departments and will be a very modern and creditable institution of about seven hundred beds. It is ideally located on the outskirts of the city in a suburb well named Miraflores, which might be translated "A Vision of Flowers," the flowers of course in this latitude being in bloom throughout the year. The units of the hospital are modern and well equipped, and there is a separate contagious disease department of ample capacity.

The National Hygienic Laboratory of Bolivia is in La Paz. Its location is adjacent to the Miraflores Hospital. Under the directorship of Dr. Nestor Morales, this institution has gained an enviable reputation in all of that part of South America. It is doing considerable research work, and the various sera and vaccines which are recognized by the profession as of value in treatment and diagnosis are prepared in an excellent manner and under thorough scientific supervision in a government laboratory, whence they are distributed.

The lack of adequate hospital facilities in Bolivia as elsewhere has been due in a large part to absence of a definite governmental policy with regard to scientific matters. As in our own country, political interference with the personnel of hospital staffs and of university faculties delays progress.

The surgeons of Bolivia have the right spirit; they have vision and ambition for the best things in scientific progress; the leading men are all young and active, they have been trained abroad, and they are cognizant of the best things in

scientific progress outside of the boundaries of their own country. Under their leadership Bolivia is undoubtedly at the beginning of great accomplishments.

TYPHUS EPIDEMIC

THERE had been an outbreak of typhus in and around La Paz early in 1921, and there was opportunity to see a number of cases of this interesting disease in various stages of its progress, from the early eruption to the point of convalescence.

A young American surgeon of great promise, Dr. Fred Eastman, in charge of the hospital at the tin mining operations of a large American corporation, was one of the victims of this recent epidemic. As is well known, the disease is transmitted by the bite of a louse, and Dr. Eastman, in his zeal for the care of his patients and reckless of his own welfare (as Mr. Graham, the general manager of the company, told me), in order that he might better care for the Indian victims of the disease and also from a strong scientific interest in the study of the malady, often slept in the native huts which were located in remote places exposing himself to infection without thought of himself. He is looked upon by the men who were familiar with him and with his work as a martyr to the cause of science. We had reason to be proud of the record of this fellow countryman of ours in a far land.

CHAPTER X

CHILE

HOSPITALS

DR. MAYO'S comments: "The port towns of Arica, Iquique and Antofagasta have hospitals, all of which we visited. We visited also a large military and civil hospital in Tacna, situated in a fruitful oasis near the Peruvian boundary. The hospitals of Chile are supported largely by the state. The hospitals at Iquique and Antofagasta are much larger and have better equipment than those at Arica and Tacna. They are under the direct charge of a progressive Catholic Bishop and are managed by French and Italian Sisters. Each hospital has a training school for about forty nurses, drawn from the lower and poorly educated classes, who are really drudges for the sick rather than nurses, and a training school for about thirty midwives.

"The bulk of the patients in these hospitals are from the outlying nitrate (saltpeter) mines. The buildings are unscreened, and although flies are not usually numerous, they are uncomfortably evident in the medical wards. Water is scarce in this rainless region; it is piped from the mountains for long distances, and is expensive. Lack of trained nurses, lack of adequate water supply, and lack of screens are the weak features in an otherwise excellent hospital system, but these defects are being rapidly overcome. The great American mining corporations on the coast and inland, such as the Guggenheims, have their own hospitals. These corporation hospitals are screened and thoroughly equipped with American appliances, and have American physicians and trained nurses. [Dr. Francis P. Corrigan, who was temporarily in charge of the Chile Exploration Company's Hospital at Chuquicamata (1918 19), says of the hospital that 'it is located in a large copper mining camp 10,000 feet up in the Andes, a day's journey from the coast. It was established by the Exploration Company, a Guggenheim corporation, to care for its people in that section. When I accepted the post I

discounted somewhat the description of the hospital that was given to me and expected something rather crude; but on my arrival at the mines I found that the Guggenheims had erected a fine modern hospital which had an equipment as complete as that of any hospital to be found in the United States, this equipment involving the usual large annual deficit which seems to be essential to the success of every hospital everywhere. The fact that this hospital was North American and new, made it an object of interest to many physicians and surgeons of Chile and neighboring countries, also to many educated laymen. They came to visit us and I began to meet and know my South American colleagues. I encountered many able men of charm and interest and was increasingly glad of every opportunity to amplify my knowledge of them. I look back with pleasure on my many pleasant social experiences with these courtly people. My contact with these visitors and our own splendid neighbors gave me a foreknowledge of the kind of men I could expect to meet among the surgeons of Ecuador and Bolivia.']

"Valparaiso, a city of about 200,000, has a number of fine hospitals, built with the high ceilings, verandas and patios typical of the Spanish plan. There are separate hospitals for men and for women, and for children under 10 years of age. All the newer hospitals are built on the general type of the American hospital, with pavilions for men, women and children; the same operating rooms, laboratories, etc., are used for all. There are pavilions for private patients in which the rates, the cheapest of any in South America, range from $2.50 to $10 a day, gold. This includes ordinary nursing and medical care. No fee is charged for operations if they are performed by the surgeon who is paid by the year from the hospital fund. Other surgeons make their own arrangements with patients.

"The British and American residents maintain a hospital of about 100 beds. It is under the supervision of a British surgeon who, since he has no license to practice in Chile, employs a Chilean licensed physician to act ostensibly as chief. This subterfuge is employed also in some of the large mining hospitals. Needless to say, such arrangements are sources of irritation to the Chilean physician. A hospital is maintained by the German colonists located on a sightly spot on a hill. The attending surgeon is Dr. Münnich, grandson of a German colonist, and one of the best surgeons in Chile.

"A schedule of operations performed in the hospitals in Valparaiso, February 13, 1920, is as follows:

German Hospital, Dr. Münnich

8:00 a. m. Nephrectomy.

8:30 a. m. Intervention for cholecystitis for an old fistula between the gallbladder and small intestine.

11:00 a. m. Hernia.

11:30 a. m. Hæmorrhoids.

Hospital de San Agustin, Dr. Iturrieta:

9:30 a. m. Cancer of the uterus; cæsarean section for constriction of the pelvis.

8:15 a. m. Dr. Engelbach: Cholecystectomy for biliary lithiasis.

Hospital de San Juan de Dios, Dr. de la Fuente:

Cholecystectomy.

"The hospitals in Santiago are very good. The old ones are being remodeled along American lines. The surgeons are doing excellent work. Professor Lucas Sierra, well known in America, was abroad preparing plans for greater hospital extension. His colleague, Dr. Amunátegui, dean of the medical school, and one of the foremost surgical teachers of South America, was in the city, but expected to leave shortly to join Dr. Sierra on his mission.

"The Public Assistance Association in Santiago should be mentioned especially. It is supported by the state and municipal governments, and is under the control of the faculty of the medical school. The association has its own hospital, in which all emergency surgery is done. Ambulance stations are located in different parts of the city, centering in one hospital which is in direct communication with the criminal courts. All postmortem examinations are conducted under the medical jurisprudence department of the medical school, in marked contrast to the inefficient coroner system in the United States. All cases of stabbing, shooting and accidental injury pass through the hospital, and the student derives the benefit of all medical and legal examinations. The uneducated native Chilean settles his disputes with the knife and inflicts ghastly wounds, which make the razor slashes of our nonvoting voters south of the Mason and Dixon line appear trivial in comparison. I was told by a Chilean surgeon that when the Roto takes out his knife, all South America squeals and runs. Any one seeing some of the injuries he inflicts would certainly be inclined to lead in the running."

MEDICAL SCHOOL

"THERE is but one medical school in Chile, and that is in Santiago. The school compares favorably with medical

schools in other countries. Opportunities for English and American physicians in Chile are not alluring. Examinations to qualify for practice are given in Spanish; they are highly technical, and are given under conditions that have not been surmounted by any American physician in recent years. When it is taken into consideration that the school in Santiago has a seven-year course and one thousand students, of whom only about thirty-five of the senior class succeed in graduating each year, the natural handicap is easily seen. Some of the students who eventually graduate spend eight, nine, or even ten years in preparation for the final degree. A fine hospital of seven hundred beds is in direct association with the medical school. The buildings for both institutions are spacious, dignified and well equipped, and are situated on a large, beautiful tract in the heart of the city. We attended a number of interesting surgical clinics and demonstrations. Professor Noe, who was trained in Italy, showed us some very beautiful specimens of *Ancylostoma duodenale*, with microscopic slides. This disease was first found in men working in the Simplon tunnel in Switzerland and is endemic in certain mines in Chile. We were interested also in the treatment of anthrax by Lugol's solution, which appeared to be extraordinarily efficient." (Comments by Dr. Mayo, 1920.)

SURGEONS

OUR visit of 1920 was responsible for our numerous friendships. At that time the first launch brought a distinguished group of men who had come to greet us, pay their respects, and take us to the dock. They were lined up and we were introduced to Dr. Edwyn P. Reed; Dr. Vincenti Dagnino, president of the medical society of Valparaiso; Dr. Gaston Lachaise, secretary of the society; Dr. R. de la Fuente, Dr. Alberto Adriasola, and Dr. Prain, of Valparaiso; Professor Caupolican Pardo Correa, Professor José Ducci, Dr. Luis Vargas, and Dr. Juan de Díaz, of Santiago. Our stay at this port was short, but we visited the town, and before taking our Trans-Andean train at noon we had refreshments at the Naval Club, with Surgeon-General Adriasola as our host. In ten days we returned to this city in the special Pullman that the government had furnished us and were literally carried away by the committee of surgeons which had greeted us on our arrival in port.

It was considered desirable to consult committees in the two large cities of Chile, and accordingly we met in conference with a selected group of surgeons in Valparaiso. We

had already spent a pleasant forenoon with the members of this distinguished committee and looked forward to our conference with a great deal of pleasure. Our meeting was held, through the courtesy of Admiral Adriasola, in a beautiful garden set aside for the use while on shore of the "Marine de Chile." The occasion was quite formal and Dr. Alberto Adriasola, the chairman, read an address and modestly suggested a few names of surgeons whom they recommended for Fellowship in the College. Among those suggested were many men whom we had already met. We found a genuine desire on the part of our committee of surgeons in Santiago to co-operate and to become affiliated in the work of the American College of Surgeons. We could not have had a more influential chairman than Dr. Gregorio Amunátegui, and in our formal meeting we had the services of Dr. W. E. Coutts as interpreter, although nearly all of the Chileans understand some English.

There seems to be the most cordial co-operation between the surgeons of these two Chilean cities. Chilean surgical ideals are high. They are not surpassed by any country of South America. The surgeons of this country, like the leading men everywhere in South America, are of the broadest type. Their European travel and their familiarity with several languages, gives them a breadth of vision that is frequently lacking in many of our surgeons who are provincial in spite of the bigness of their country.

At Viña del Mar, a suburb of Valparaiso, we were intercepted and conveyed in automobiles to a tropical garden where, in the shade of enormous trees, a wonderful banquet table was spread. A large oval canopy was stretched overhead, and in the background were the American, English, and Chilean flags. The entertainers were headed by Dr. Vincenti Dagnino, who made us a formal address which was responded to briefly by Dr. Mayo, Dr. Martin, Dr. Reed, Dr. Münnich, Dr. Avarosus, and Dr. Adriasola. Then our hospitable friends conducted us to the dock and by special launch took us to our ship.

THE *VANDYCK* CRUISE

FROM Dr. Salisbury's Log, 1923: We were met by Dr. Edwyn P. Reed, of Valparaiso, at Los Andes on March 23. Dr. Reed accompanied us to Santiago and informed us of the program they had prepared for our entertainment. The following morning we were received in Del Salvador Hospital by the Fellows of the College in Santiago, and also

Dr. Reed and Dr. Münnich of Valparaiso, members of the Faculty of Medicine, and students. At a meeting in the amphitheater of the hospital, Dr. Hugh H. Young presented Dr. Gregorio Amunátegui, surgeon, dean of the Medical Faculty of the University, and recently elected president of the University, for Honorary Fellowship in the American College of Surgeons. This honor of the College was conferred by Dr. Truman W. Brophy, our acting president for the West Coast meetings.

Dr. Amunátegui was greatly moved, and accepted enthusiastically the *Toga Collegii*, expressing his gratitude and declaring himself an humble disciple among the ranks to hold sacred the ideals of the American College of Surgeons.

The remainder of the morning was consumed by sightseeing and visits to the institutions and hospitals in company with the Chilean Fellows and members of the profession, prominent among them Dr. Lucas Sierra, Dr. Luis Vargas, Dr. Caupolican Pardo Correa, Dr. Francisco Navarro Valenzuela, and others. At noon luncheon was served at the Union Club, and in the afternoon the United States Ambassador, Honorable William Miller Collier, held an informal reception at the Embassy, a beautiful edifice and one of the few owned by the United States.

At four o'clock there was a reception for the *Vandyck* cruisers in the Government Palace by the president of the Republic, Dr. Arturo Alessandri, who had just written the new health code for the country. Santiago was in gala attire for the opening of the Fifth Pan American Congress, recently in session.

On the morrow we entrained for Valparaiso, the great port of Chile, where we arrived at noon. Dr. and Señora Guillermo E. Münnich gave a garden party and tea at their home on *Cerro Alegre* (Happy Hill). They have a beautiful home and gardens overlooking the city and sea, and here there were present many Fellows of the College and their families, including Dr. Edwyn P. Reed, Dr. Alberto Adriasola, Dr. Rudecindo de la Fuente, Dr. Gaston Lachaise, Dr. Jean H. Thierry, Dr. Miguel Manriquez, and others. A visit to the hospitals of Valparaiso revealed their completeness and modernity.

Dr. Reed, with four of his fine family of eight sons, bade us farewell at our ship, the SS. *Essequibo*, which sailed at noon on Sunday, March 25, northbound for the equatorial waters of the Pacific.

CHAPTER XI

ARGENTINA

SURGEONS

THE comments of Dr. Mayo follow: "One of the most respected of Buenos Aires' notable surgeons is Marcelino Herrera Vegas, a man of great wealth and philanthropy, and an inspiring influence for good in the medical profession. Dr. Herrera Vegas speaks four languages fluently. He has contributed to literature several monographs on special surgical subjects, and in conjunction with the eminent surgeon, Dr. Daniel J. Cranwell, now Professor of Surgery and Dean of the Medical Faculty, he has prepared an important work on hydatid disease. The chapter devoted to hydatids of the lung will be particularly interesting. A large number of these cases were seen in the several hospitals. Hydatid disease is very common in South America, and is thought of whenever a patient presents unusual symptoms. When these cysts occupy the lungs, the fluid can be agitated by motion and the waves can be reproduced in moving pictures. Dr. Herrera Vegas has one of the finest private libraries in South America.

"Dr. Pedro Chutro, one of the professors of surgery at the medical school, is well known in the United States. He served with the French during the Great War in charge of a large hospital in France, and it is generally conceded that his work was not excelled by that of any other surgeon. At the close of the war he was requested to go to New York to demonstrate in the military hospital there his original methods of dealing with old infected compound fractures with osteomyelitis. Professor Chutro was decorated by the United States with the Distinguished Service Medal; he is one of the few foreign surgeons to receive this honor. Dr. Rodolfo Pasman, one of the professors of surgery in the medical school, is also well known in the States. All the surgical work we saw in Buenos Aires was good, and carried out with characteristic skill and precision. The surgeons of Argentina compare favorably with those of any other country in the world.

Medical School

"THE chief medical school of Argentina is located at Buenos Aires and is a part of the university. The building is a dignified structure and occupies an entire city block. The school has an enrollment of between four and five thousand students. The course is seven years, but so rigid, particularly in theoretical branches, that only about one-fourth of the students graduate in this time. Many spend eight, nine, or even ten years in obtaining their degrees. Approximately two of the seven years, however, are spent on physics and chemistry, studies that are pre-medical in North America. Public health, dentistry and veterinary medicine are under the direction of the medical school. Pre-medical courses in anatomy, chemistry and the fundamental branches are also given at the La Plata University, about forty kilometers from Buenos Aires. The department of anatomy at La Plata, under the direction of Dr. Pedro Belou, is unusually good. I was much interested in some researches in human and comparative anatomy of the liver and gall-bladder which he had under way. The museum of natural history of La Plata is said to be the finest in South America, and we spent a half day with the curator, the venerable Professor Quevedo, observing its wonders. The anthropological collection is unique.

Hospitals

"MANY of the thirty hospitals in Buenos Aires are old, but practically all are in a process of reconstruction along modern lines. The hospitals have high ceilings, large window spacing, verandas and gardens, well suited to the climate but they are not screened. Trained nurses, as we understand the term in the north, do not exist in South America. There is only a small middle class from which to draw material for nurses; it is obviously impossible under present conditions to obtain students from the cultured class qualified for such work. However, the general average of education is being raised, and new training schools are being established with American nurses in charge. The records in all the hospitals are extraordinarily good. Few hospitals in America can show records equally well kept.

"Almost all the hospitals and charities in Buenos Aires are financed by the Women's Benevolent Association, which collects and dispenses funds. The municipal authorities are said to be very jealous of this organization; but it is so strong, and the money is so well administered, that no real objection can be filed against it.

FACULTY OF MEDICINE, BUENOS AIRES

"The Rivadavia Hospital occupies almost an entire block of land and is divided into medical, surgical, gynecologic and maternity departments. In the museum of the latter are many rare and well preserved specimens, as well as a very complete and well selected teaching collection. In the department for children is a fine infants' clinic.

"The new medical hospital is under the direction of Dr. Agote. Its organization and its records are models of excellence. Clinical work and investigation of the most extensive and advanced character is being carried on. Dr. Agote was the originator of the citrate method of blood transfusion and has perfected the technique of the procedure. A detailed description cannot be given of all the important features of this institution, but the American student of internal medicine who arranges to spend a year with Professor Agote will, indeed, be fortunate.

"The British Hospital in Buenos Aires has two hundred beds. Sir John O'Conor, senior surgeon, well known in the

United States by his frequent contributions to American surgical journals, and Dr. Robert Halahan, are the surgeons in charge. Dr. Halahan, the junior surgeon, was educated in Ireland about twenty years ago. After coming to Buenos Aires he passed the examination given in Spanish. He is quite North American in his methods. Many North Americans go to this hospital when they are ill." (1920.)

Dr. Marcelino Herrera Vegas

DR. Marcelino Herrera Vegas, who is one of the deans of surgery of the southern continent, is a man whom it is an exceptional honor to know. He has the face of a seer, and he possesses a sensitive, æsthetic temperament. He is connected with the distinguished Bolivar family and occupies an estate which dates back to the founding of the Republic. His town residence is a palace — the repository of works of art in painting, sculpture, literature, and the furnishings of a refined household. His library, with its gallery, is a cabinet of exquisite taste and appropriateness. With his own hands he has cross-indexed and catalogued the contents. The books, all his friends, are clothed in appropriate and substantial bindings, as he would dress his sons and daughters whom he loves. He writes with his own hand his literary contributions and gets recreation by making his own research. When his eyes and brain are tired, instead of playing games, he practices his languages and reviews his poets by writing plays in long-hand and by copying his favorite poems. He has twice written the plays of Shakespeare in long-hand to aid him in perfecting his English. To illustrate some point in conversation, he occasionally quotes to you a thought from an English, German, French, or Spanish poet, and then repeats the exact words with the interrogation: "Do you remember?" And, of course, as a rule you do not. Men of his class seem to have sufficient time in which to crystallize their knowledge, and they have a knack of utilizing their learning without appearing ostentatious. Dr. Herrera Vegas would rather know thoroughly the great thought of a master, in order that he might live it, than be the originator of something but little better than the commonplace. We, in rapid-fire North America, must seem crude and immature in comparison with the associates of this man who reads his classics, and who has gained for himself a knowledge of the best of the ages. And with it all he is a practical teacher of surgery; he is a skilled operator; he endeavors to redeem the cripples and to save the lives of the poor of Argentina; he

is a scientific man in the understanding of his art; he visits hospitals, dresses wounds, is a time-server, follows schedules, and consults time tables. When the summertime has come and he is through with his classes and the day's work is done, he does not employ his time in useless play, but goes to his *hacienda* and lives in the out-of-doors with the companions of his estate, and supervises the cultivation of the land. He watches trees grow that were planted by his ancestors, and he plants trees that will be watched and enjoyed by his grandchildren. This is our friend as we learned to know him—a superb character, a true gentleman, and one who is greatly admired by his confrères.

The *Vandyck* Cruise

FROM the Log, 1923. At five o'clock on the afternoon of Saturday, March 17, 1923, the Fellows of the College and other passengers of the SS. *Vandyck* assembled in the beautiful auditorium of the Faculty of Medical Sciences in Buenos Aires for the scientific meeting and Convocation, which was a very brilliant affair, conducted under the presidency of Dr. José Arce, the eminent Rector of the University. The one hundred odd Fellows of the College from North America wore their Fellowship gowns and occupied the center of the hall surrounding the raised platform on which were gathered the members of the Faculty of Medicine of Buenos Aires; the ladies and members of the local profession occupied places immediately back of the Fellows of the College, and a large number of medical students were massed in the aisles, the window and door spaces, and in a solid group in the rear of the dais, forming an effective and interesting background.

At the close of his address of welcome, the Rector called upon the Director-General of the American College of Surgeons, who thanked the Argentine medical profession, in behalf of the College, for the cordial reception which it had accorded to the scientific brethren from North America, after which he presented for Honorary Fellowship in the College "the distinguished Dr. Marcelino Herrera Vegas, President of the Academy of Medicine and the Surgical Society of Buenos Aires; Member of the Royal Society of London; literateur, savant, philanthropist, linguist, a citizen of international affairs, whose distinguished family laid the foundations of South American independence." The Honorary Fellowship was conferred by the Acting President of the College, and acknowledged by Dr. Herrera Vegas as follows:

"Although I understand that the ceremonial used in your College in cases such as this is very simple and short, so much so that the honored recipient has scarcely time to answer the allocution addressed to him, I ask your permission to break with this laconism for once and beg you to concede me a few moments in which I may reply to your kind and friendly words and also express the feelings which flood my whole being and compel me to make you my very deep acknowledgment.

"Personally I have a special reason for venturing to ask your indulgence in listening to me. You all know that I was called by you to different meetings of your College, in Philadelphia, in Montreal, and again in Boston, to receive the title of Honorary Fellow of this institution, since an article of the by-laws forbids the conferring of Honorary Fellowships *in absentia*. Unfortunately I could not attend any of these meetings for private and very painful reasons that forced me to desist from making the journey, and to renounce the intimate pleasure of being admitted in your friendly and hospitable country, which I last visited nearly thirty years ago. Today, thanks to a number of happy events, most agreeable for us all, many Fellows of the College are assembled in these precincts, and the presence among them of the Acting President of the Board of Regents has made it possible for me to be formally admitted.

"So I have come, as you with your friendly courtesy, which I very fully appreciate, have wished, to take part in this assembly and receive the diploma that accredits me an Honorary Fellow of the American College of Surgeons. This honor, as great as it is unexpected, is far above my poor merits; and I accept the distinction, which crowns in a very special manner my academic career, in the knowledge that it is addressed not to me individually, but through me to the University of Buenos Aires, in which I have been only a modest collaborator. The diploma you have just conferred on me is a most precious object which will occupy a place of honor, and it will never cease to bring back to me the memory of this historic assembly, formed of some of the foremost masters of American surgery of today.

"I assure you this ceremony has moved me most deeply and has stirred me to the depths of my heart. It is taking place on a spot made sacred to me by the memory of many records and remembrances of my happy and gay boyhood hours, and now, with the visions passing before me of my old teachers to whom I owe so much, and my good companions, many of them fallen in the battle of life, I am living again in a flood of intimate reminiscences.

"Most welcome you are, illustrious representatives of the American College of Surgeons and thereby of our great Northern sister, whose wonderful progress, especially during the last century—*still far from ceasing*—has surpassed all expectations, even the most optimistic. For me the greatest thing realized by your people, in whom have been remolded far over the seas the Latin and Saxon races, is the harmony of your development, culminating in an equal success in every path to which you have turned your steps. The vast areas of your territory, extending from the Pacific to the Atlantic oceans, and from the cold lands of Alaska to the torrid zone of Florida, crossed by great rivers and mighty mountains, are closely populated by one hundred and twenty million inhabitants, and are covered with the most populous cities of the world. Your people has created a powerful navy and a well trained army that have crossed the seas to carry the 'Stars and Stripes,' covered with glory, alongside the flags of the allies through the beautiful fields of France.

"But above all this it has advanced artistic and scientific culture in a most admirable degree, and has spread throughout the territory of the States its hundred and fifty universities for teaching—and for more than teaching, for the development of civic virtues, ideals, and character; in a word, to quote a great American thinker, '*to form a clear mind.*'

"This cruise, which has been guided by the hand of fortune, will be an outstanding milestone on the path of the scientific life of both countries. It also represents a transcendental mission of lofty educational culture, strengthening the moral bonds that link us and giving us an invaluable mental exchange, especially as regards the study of the improvement of mankind's physical and spiritual health, the work of the ever-growing science to which you have devoted your lives. And with this mingling of our minds, striving to learn one another's intellectual character better, shall we strengthen the ties that bind together these two Republics of each extreme of this new continent—a continent whose peoples Providence has appointed to take allied action in realizing the great ideals of peace, fraternity and love, in these sad moments in the history of mankind.

"But even yet, after those great events that have shaken Europe to its foundations, in which your country gave, together with its sons, workers for the eternal ideal, the moral power of its name to the service of Justice and Liberty—even yet it does not seem that Iris will shine out in the sky and disperse those banks of black cloud, heaped up by Bellona; still

we look in vain for the wise Minerva, bringing in her hand her symbol of the green olive branch. Faced by this uncertain future, when people even fear for civilization itself, all eyes are turned to these fruitful lands of America, whence will arise a new race and a new civilization, bringing an era of lofty ideals that shall raise humanity to heights of perfection never before reached.

"Only one sad note sounds in our ears in this harmony of happiness and pleasure, and that is the remembrance that your stay among us will be all too brief; how it brings home to us Goethe's wish, that we could but delay the happy hours and keep you longer at our side.

"I thank you, Doctor MacDougall, and all you my very good friends, for your courtesy and your good-will, which with the merited prestige of your names add such splendor to this meeting—a meeting that will remain an ineffaceable memory in the annals of this house. You will, I hope, have formed new ties of friendship in this country, which I am sure will add a new charm to your life, bringing you a remembrance that neither time nor distance can weaken or efface.

"One request I have to make of you, and then I have finished. It is that when you arrive again in your country you will give my warmest and most affectionate greetings to Doctor William Mayo, one of the pillars of modern North American surgery. To him, and to Doctor Martin, whose presence among us to-day it is our good fortune to enjoy, do we owe the inspiration of these happy scientific cruises which have done, and will do, so much good service to the cause of closer and warmer relations between our two great democracies.

"To you all I say in the old language of Green Erin, 'Cead míle fáilté.' (*Cad mili falta.*)"

Dr. James T. Case, of Battle Creek, Michigan, and Dr. Hugh Young, of Baltimore, presented scientific papers in Spanish.

CHAPTER XII

URUGUAY

SURGEONS AND MEDICAL INSTITUTIONS

FROM the Log, 1921. We were anxious to see some of the surgeons at work in their hospitals, and accordingly at seven forty-five on the morning of our third day in Montevideo, Dr. Watkins and I were taken by Dr. Horacio García Lagos for a clinical visit. Dr. García Lagos speaks English perfectly and acted as our official interpreter and guide during our sojourn in Montevideo. He is thoroughly in touch with the medical profession of Uruguay.

We proceeded to a small private hospital, conducted by Dr. Alfonso Lamas, where we saw him perform the first operation of a two-stage procedure for hydatid cyst of the lung, under local anæsthesia. The pleura opposite the cyst was opened through a trap door created by removing a portion of the rib. An aseptic plastic adhesion was anticipated, a closed track established, and the cyst drained at a later date, à la Bevan's operation for abscess of the lung. Dr. Lamas quoted Dr. Bevan frequently and gave him credit for the idea. This surgeon showed us his record of the case, his X-ray findings, and every evidence of the most careful diagnostic routine. He operates, as do all of the South American surgeons whom we have seen, with the French technique. We had nothing but the greatest admiration for his work, and found that he had operated upon a large number of hydatid cysts of the lung which are very prevalent in the southern portion of South America.

Later we went to a well equipped British Hospital where Dr. García Lagos does his work; also to a new Italian Hospital, one of the show-places of medical Montevideo, which is built along very artistic lines and is the last word in modern hospital construction. We then visited the large civil charity hospital which is closely connected with the medical department of the University, and saw several operations by Dr. Alfredo Navarro, one on an old man who was suffering with acute

obstruction of the bowel. This case had been well worked up with elaborate records, laboratory tests, and X-ray findings. Everything about the operating room indicated that good, safe operating was the accustomed routine. The acute obstruction in the patient in question was a complication of a chronic obstruction caused by a neoplasm in the sigmoid. A colostomy was quickly and skillfully performed under high spinal anæsthesia. Dr. Navarro then performd an operation for simple appendicitis. His technique was French, and his assistants handed him the instruments, threaded needles, and sponged the wounds. This procedure is necessary because they have not the advantage of our nursing organization. However, there was a very efficient helper present in the form of a strong, intelligent woman who brought supplies, hand washes, and did the rough work about the room. Dr. Navarro has an interesting personality and the appearance and actions of our own late Nicholas Senn. A round ligament operation was performed in an adjoining room by two of the assistants in gynecology. The technique was thoroughly up to date, and the operation could nowhere in the world have been performed with greater skill.

Dr. Mayo's Comments, 1920

"THE hospitals in Montevideo are modern and equal to any in South America. The older hospitals are built in the Spanish pavilion style, usually one story, with gardens between the pavilions. The new hospitals are several stories high. Here, as elsewhere in South America, there are few trained nurses and an absence of screens. I was told that when screens were placed no one respected their use, and, indeed, in the few instances where screens were seen they were carefully propped open. With the exception of the hospitals maintained by the colonies from various countries, those in Uruguay are supported by the government. Accommodations are provided for pay patients, and the price of rooms in the private pavilions ranges from $3 to $6 a day. One beautiful hospital (for women) is under the direction of Dr. Juan Pou Orfila, a noted surgeon. The Italians have a very beautiful hospital with many interesting features. To prevent flies from entering the operating rooms, persons pass from the main corridor through a small anteroom which has blue glass ceiling, sides and door. It has been demonstrated that flies will not pass through this blue-lighted space.

"The chief surgeon of the British Hospital, Dr. García Lagos, professor of surgery in the government medical school, is

ITALIAN HOSPITAL, MONTEVIDEO

particularly interested in surgery of the stomach. He has developed a method of dealing with gastrojejunal ulcers and hæmorrhages from the gastro-enterostomy opening by making an incision in the anterior wall of the stomach, drawing the gastro-enterostomy completely through, and then proceeding according to the necessity of the case. I have employed this method twice in emergency, such as hæmorrhage immediately after gastro-enterostomy, but have never used it in the manner described by Dr. García Lagos for a direct attack on chronic conditions involving the stoma. It would appear to have merit in suitable cases. Dr. Enrique Pouey, the leading gynecologist of Uruguay, has a fine hospital for women, just completed by the university. Dr. Alfredo Navarro, another prominent surgeon of South America, has splendid hospital facilities and surgical material.

"The primary school course in Uruguay is five years and the secondary course six years. The medical school, a part of the University of Uruguay, is a large, ornate and dignified building. Six hundred students are enrolled, and the graduating classes number from sixty to seventy. The course in medicine is seven years. The medical school has a fine library. The laboratory facilities and equipment are excellent, and there is ample material for dissection. Postmortems are permitted on all patients dying in the hospitals."

The *Vandyck* Cruise

FROM the Log, 1923. In Montevideo, a formal medical meeting was held in the assembly hall of the Faculty of Medicine at nine o'clock on the evening of Friday, March 23,

1923. Dr. Alfredo Navarro, president of the Society of Surgery of Montevideo, presided.

Dr. Navarro delivered an address of welcome in Spanish, which was translated into English by Dr. Nin y Silva, of Montevideo. Scientific papers were presented by four of the Fellows of the American College of Surgeons from North America. Dr. A. J. Crowell, of Charlotte, North Carolina, spoke on "Removal of Ureteral Stone by Cystoscopic Manipulation; Disintegration of Cystin Stone by Pelvic Lavage and Internal Medication"; Dr. R. D. Kennedy, of Globe, Arizona, on "Tendon Transplantation in the Forearm Following Irreparable Injury to the Musculospiral Nerve"; Dr. John F. Barnhill, of Indianapolis, Indiana, on "Sarcoma of the Maxilla"; and Dr. James T. Case, of Battle Creek, on "Some Comments on the Surgical Treatment of Hyperthyroidism."

JUST before the SS. *Vandyck* reached New York, in April, 1923, Dr. Juan Pou Orfila, of Montevideo, Uruguay, who was coming to the United States, made an address as follows:

"I ask you the favor of a few minutes of your attention to express the ideas and sentiments that I have in my mind and in my heart in these last hours which precede the end of the voyage which I have had the good fortune to spend with you.

"Above all, I wish to say two words about the spirit with which I am going to accomplish the mission that brings me to the United States and Canada.

"Orison Swett Marden said in his famous book 'Pushing to the Front': 'What are you here for in this world?' That is the question of this century. I am quite in accordance with him. It is necessary that each person should have his profession. But I think that this alone is not sufficient. It is above all necessary to love one's profession strongly. This is one of the ideas that takes the deepest roots in my mind.

"If I had to establish ten commandments to guide the conduct in life of modern man, one of these would be: 'Love and serve your profession!'

"And we must show by actions that this love is of the most noble and highest nature.

"Another ideal that I have tried to bear in my mind is the one of *human brotherhood*. When I was very young, I studied modern languages with the idea that this was the best way to come nearest to the hearts and minds of the different nations leading in civilization.

"I have thought that it is a duty of each South American to work for his country, for the Latin American and Pan American Union, and for the universal peace, contributing in this way to the realization of the ideal 'Pro patria, per orbis concordiam.'

"With these two ideals, love of profession and human brotherhood, which are also ideals cherished by the American College of Surgeons, I go to North America to perform the mission bestowed upon me by the Faculty of Medicine of my country, the study of medical education in the United States and Canada.

"With this aim in view I propose to visit your principal hospitals and clinics. And I am going confidently, because I am sure I can count upon your assistance.

"The realization of this splendid voyage is an example of what the co-operation of the members of the American College of Surgeons can accomplish under the intelligent direction of its committee, the President and Dr. MacDougall, and especially of Dr. Franklin H. Martin, the 'alma mater' of this noble institution to which I have the honor to belong.

"A voyage like this, with colleagues possessed not only by the same ideals but also showing friendliness and kind attention and advices for the fulfillment of their mission, is for a South American surgeon a special fortune, and will represent in his life an epoch full of agreeable remembrances which to forget would be impossible.

"It is also not possible to picture the approach to a country under better circumstances, and to have a more dignified, agreeable, and efficient introduction.

"For all these reasons you perhaps can understand with what satisfaction I manifest my gratitude for the kind attentions shown to me and to my family; and I speak also in the name of Dr. Bauzá, my distinguished countryman, before stepping on the soil of North America. I wish to express our most fervent wishes for the personal luck of each of you, for the prosperity of the medical profession in the United States and Canada, and for the more intimate ties of union between the nations of our continent, which can be best brought about by the three factors of: *Virtue*, *Talent*, and *Work*."

CHAPTER XIII

BRAZIL

SÃO PAULO

EARLY one morning, shortly after our arrival in São Paulo in 1921, Dr. Benedicto Montenegro took us to inspect the Municipal Hospital and to see some operating. This hospital is one of the teaching institutions connected with the University. The building is large and substantial, with high-ceilinged rooms and an abundance of large windows. Around it is a park-like garden filled with trees, shrubs, and flowers, and in the center is a large patio with a playing fountain. The facilities for the care of municipal patients are not sufficient. The hospital is built to accommodate five hundred patients, but at the time of our visit it contained nine hundred. Each of the five hundred beds had an occupant and at the foot of practically every bed, in a broad aisle, was a mattress on which there was another patient. This condition has been remedied.

We were introduced to many surgeons, physicians, and attendants. One of the surgeons was Dr. J. Alves de Lima who strikes one immediately as a man of distinction. He is of the true Portuguese type and about forty-five years of age. He has the appearance of a student, tempered by a thorough knowledge of the practical world. He speaks and reads English with facility.

He was preparing to do a gastro-enterostomy for what he called an inflammatory obstruction of the pylorus. His records were elaborate, and the case had been painstakingly and conscientiously worked out. The records were translated for us, and we inspected the X-ray plates. The operating room, one of several, was large, with a skylight and sidelights, and with sterilizing rooms equipped with the latest apparatus. He operated with one assistant who aided him in handling instruments, and there was one additional attendant who handed to him sealed packages of supplies. The chloroform anæsthetic was given by a physician.

The operation was skillfully performed, with a technique that one sees in Paris where trained nurses are not available.

The pathology demonstrated what appeared to be an inflammatory thickening about the seat of an old ulcer. The gastroenterostomy was done with Mayo clamps, exactly as one has many times seen it done by the operators of the Mayo Clinic. His conduct of the case demonstrated that he is a surgeon of ability, and his technique is equal to that of the best surgeons of the world.

We then inspected a pavilion devoted to orthopedic surgery and met its chief, Dr. Luiz de Rezende Puech. He is a genius and, like all men of that type, is an enthusiast. While knowing little of orthopedics, we were fascinated by this man who is a devoted slave to his work. As we passed through his crowded wards the patients, cripples of all forms, among them many children, fairly clung to him because of their love for him. In several places in his pavilion two children occupied one bed, and there were also many children on mattresses on the floor. This distressing condition of overcrowding is well recognized by the authorities and a definite effort was inaugurated to remedy it. The large foundation of a new building, which will greatly increase the capacity of the hospital when its superstructure is built, was pointed out to us. However, work on this building has been pursued, after temporary abandonment, and the new buildings will be ready for occupancy in the immediate future.

We lunched, or "breakfasted," at the Automobile Club with a group of physicians, including Dr. Montenegro and Dr. Alves de Lima. In the afternoon we inspected the Maternity Hospital, a pay and charity institution which is under the direction of Dr. Raul Briquet. The hospital accommodates from eighty to one hundred maternity patients, and Dr. Briquet does the operating that develops from such cases. The building occupies a site in the residence section of the city, and overlooks the city proper which lies in the valley below. The private room and ward accommodations are very attractive, and midwives and students of medicine are admitted for instruction.

The meeting of the São Paulo Medical Society was scheduled for that evening, and as I had learned in advance that it was to be a short one, with but one paper scheduled, I suggested to Dr. Montenegro (and the suggestion was received with enthusiasm) that Dr. Watkins be asked to show some lantern-slide illustrations of his operation for prolapse, and Dr. Watkins consented to give a short demonstration.

The society met in the assembly amphitheater of the Policlinic, which has a library and reading room, and is the gath-

ering place for the medical profession of São Paulo. It occupies at least two upper floors of a pretentious building in the business section of the town. Dr. Watkins and I were the guests of the society. Dr. Montenegro was made the official interpreter, and to him fell the task of reading to us an address of welcome in English. To this I replied, followed by Dr. Watkins, expressing our thanks for the reception which had been accorded to us and our appreciation of their medical institutions.

The president of the society, Dr. Enjolras Vampré, honored us by making us corresponding members of the Medical Society of São Paulo. Dr. Watkins then presented his slides and explained briefly their purport. His efforts were received with genuine enthusiasm, and several of the gynecologists present were evidently familiar with his work. After a brief report of a case, presented by a member of the society, adjournment was in order, and we stepped into the library, where we drank black coffee and were presented to the members.

Another evening, Dr. Watkins and I were the guests at a banquet given in our honor by the medical men of São Paulo at the Automobile Club. The setting was one of the most beautiful I have ever seen. The table which was laid in the banquet hall was in the form of a horse-shoe with a wealth of flowers that was bewildering.

The São Paulo Automobile Club is about the last word in clubs, being famous for its luxurious appointments, the scope of its entertaining capacity, its restaurant, libraries, card rooms, reading rooms, café, roulette rooms, and ladies' restaurant—all equipped in the most exquisite taste and without regard to expenditure.

Dr. Edmundo Zavier, a distinguished internist of Brazil who speaks a little English, presided at the feast. He is very anxious to visit the United States for the purpose of studying our medical schools and especially our method of teaching internal medicine. At the proper time, Dr. Alves de Lima read an address in English to the guests. He was followed by a young man, Dr. Paulo Souza, who also read an address in English. Dr. Souza is connected with the school of hygiene which, I believe, is in some way fathered by the Rockefeller Institute. The two North Americans did their best in their speeches to show their gratitude for the many courtesies which they, as strangers, had received from their new-found friends of Brazil. We of the northern continent can only admire, receive, and beg them to come to us so that we may bind more closely the ties of friendship.

We visited the Sanatorio Sta. Catharina, where we witnessed an operation by Dr. Walther Seng, one of our hosts of the evening before. Dr. Seng, while a Brazilian, is German in appearance and training. His operation consisted of an excision of the pyloric end of the stomach for an inflammatory obstruction, with closure of the duodenal end, and anastomosis of the jejunum to a portion of the stomach closure. This hospital is conducted by a congregation of German Sisters, has a capacity of 125 beds, and is open to all operators.

Later in the morning we made a short inspection of the Instituto Paulista which has three services—a surgical, a medical, and a separate department of 125 beds for mental diseases. It occupies a beautiful site, its buildings are large and its grounds commodious and beautiful. The hospitals here, like those we had visited in other cities of South America, are open to two principal criticisms by the surgeons of North America: first, the lack of adequate training schools for nurses; and, second, the lack of screens for the windows of their wards, operating rooms, and private rooms.

Selecting a Professor of Gynecology

AS guests of the Faculty of Medicine we attended an unusual function that had been in process for several weeks —the selection of a professor of gynecology to succeed Dr. Carvalho, deceased. There were five contestants, all well-known surgeons and teachers. The scene that we were invited to witness occurred in a large amphitheater which opened upon a patio. Through the door of the anteroom we could see the audience of three hundred physicians and surgeons of the city who desired to witness the contest and await the result. The members of the Faculty, with Dr. Watkins and myself as guests, filed onto the platform at one end of the room and received an enthusiastic welcome. In the center of the arena between the audience and the Faculty, in a space about ten feet square, were two chairs and a small table on which were a thermos jug of water and a drinking glass. The director of the Faculty presided. From a strong box, which was unlocked by the secretary in the presence of the Faculty and the audience, were taken five large envelopes, each elaborately sealed. The seal of one of the envelopes was broken and a name was read. A tall, full-bearded, keen-eyed, rather pale man about forty years of age came forward and received the manuscript. He passed to the table in hushed silence, poured a glass of water, moistened his lips, and then

bowed to the director, the members of the Faculty, and the audience. In the meantime, another distinguished looking man had taken the chair at his right. Then the principal actor scanned the faces of the members of the Faculty and, remaining seated, began to read his thesis. Two weeks before, he, with the four other contestants, had been given twenty-four hours in which to prepare in his own hand-writing a thesis on the subject of pelvic peritonitis in women, the subject of which was announced at the time. These theses were then sealed, and on this day each individual in turn was to read his thesis.

The first man to read was checked by one of the contestants, to guard against unfair interpolation on the part of the reader, as it was necessary that the thesis be read as it was written. The other principal tests of the contest were: A one-hour lecture before the Faculty and a public audience on some phase of gynecology, on a subject announced after the contestant mounted the platform, with the privilege of illustrating by chalk drawings, improvised as the speaker proceeded; an outline of the study, diagnosis, and operative treatment of a case, worked out under the surveillance of the committee.

Soon our speaker on this occasion was in the midst of his reading, and his entire being was engaged in the effort. He was deliberate, emphatic, and mightily impressive. He undoubtedly had some of the qualifications of an orator as he was able on several occasions to command applause, and several times laughter. But he was thoroughly in earnest, and his diction was so deliberate and direct that Dr. Watkins and I could gain a considerable notion of his argument, although we could not understand a word of his Portuguese. He finished with a dramatic, appealing climax, which brought a round of applause that lasted for several seconds. We were about ready to vote "yes" on this candidate because of the general impression we had gained from his artistic presentation.

Then the one who occupied chair number two received his manuscript, and another candidate succeeded him in the capacity of checker, and the second paper was read. This candidate was a strong, practical man, and he proceeded, apparently under considerable suppressed excitement, to read his production in an undramatic, business-like manner. At the end he was greeted by applause, but less enthusiastic than the first. As he was lost in the audience, the man who had been verifying his manuscript stepped forward and received his thesis. As he did so there was an outbreak of enthusiastic applause from the audience and some members of the Faculty. The candi-

date was a large, strong, clean-shaven man with an intellectual face, and a dignity and poise that augured ill for the other candidates. His thesis, which he read quietly, was enunciated with force, and his arguments were apparently sound. He commanded the attention of the entire audience, including those who did not understand his language. When he finished, there was an outbreak of applause that lasted several minutes. Many people from the audience rushed forward and offered congratulations which he received with perfect poise. The whole impression made by this man was most favorable.

The remaining theses were read by the two other candidates and the contest was finished. The meeting adjourned, and the committee (one member of which was our guide, Dr. Montenegro) retired. It was announced the next day that the third contestant, Dr. Moraes Barros, had been elected as professor of gynecology in the São Paulo University, to succeed Dr. Carvalho, deceased.

The graduation thesis is still used. The theses are printed and bound (often well illustrated) at the expense of about $100 each to the school. Each student is assigned time to read and defend his or her thesis in public to two or three members of the Faculty. We were present when a woman was doing this with much vigor, self-composure, and ability (apparently), as it was done in Portuguese.

RIO DE JANEIRO

The Faculty of Medicine

DR. OSCAR CLARK, shortly after our arrival in Rio de Janeiro in 1921, took Dr. Watkins and me to the Faculty of Medicine. There we were met by Dr. Aloysio de Castro, the director of the Faculty, and under his guidance thoroughly inspected the medical school plant. Dr. de Castro, a young man under forty, a neurologist by specialty, during the four years after the beginning of the European war planned and superintended the construction of this building which must be one of the most complete and comprehensive that exists. It is a large, square, two-story structure of stone and stucco, having at least a six-hundred-foot frontage. Upon exploring its main entrance, one soon finds himself in a large central patio with a concrete floor. From this court, through large doorways appearing like imposing colonnades, one may enter the dozen or more complete and separate departments of the College,

FACULTY OF MEDICINE; CORCOVADO MOUNTAIN IN THE BACKGROUND

each with its individual equipment. The second floor is reached by a stairway which leads to a broad balcony that overlooks the court. The class-rooms are large and attractive, the ceilings are high, and each department has its own teaching amphitheater with comfortable chairs and mahogany desks for the students. There are motion picture cabinets, projectoscopes, and a broad demonstration platform where every facility is provided for illustrating and demonstrating each particular subject.

The laboratories are new and are equipped with the very latest devices. Each teacher of a theoretical subject has his own separate headquarters, with a comfortable office and an exclusive apartment where he may enjoy seclusion.

There is an attractive assembly room for the accommodation of the students, the Faculty, and the director. This room is used for convocations and on other important occasions. At one end of the room is a broad dais flanked at right angles by three tiers of seats, each row of which has in front of it a large continuous desk. This slightly elevated platform is for

the seating of the director, the Faculty, and other distinguished personages. Its general contour is not unlike a horseshoe whose ends open into a broad room where the audience is seated and which in turn opens through a colonnade onto the central patio of the whole building.

The medical school occupies a beautiful site under the brow of a mountain at the extreme southern end of the bay. It faces the bay, and has at its side next the water, and under the shadow of Sugar Loaf, a splendid location for the contemplated and much needed clinical hospital. There is a sufficient reserved space to the south of the main building to accommodate an anatomical building and to care for future expansion.

Through the great open windows of one of the recitation rooms, with its polished mahogany seats and attractive equipment, we could see the mountains and the shipping of the bay. One of us remarked to the director that he must have had an eye to the artistic environment in the construction of his workhouse. "Yes," he explained, "one can do more inspiring and more interesting teaching if his surroundings be attractive and satisfying."

Upon returning to the hotel we met Dr. de Mendonça who called with his wife and daughters, accompanied by Dr. Clark, his son-in-law. Dr. de Mendonça is practically the dean of surgery in Rio de Janeiro. He has had a long and distinguished career.

Oswaldo Cruz Institute — Dr. Carlos Chagas
Dr. Bowman C. Crowell — Dr. Adolph Lutz

MARCH 21, 1921. The equinox. Rain in a downpour from early morning until nine o'clock in the evening. As yet we had not experienced any very warm weather. In the early morning Dr. Bowman Crowell of the Oswaldo Cruz Institute (now Associate Director of the American College of Surgeons), and Dr. Clark called and carried us off to inspect the Institute, named for their Gorgas —Dr. Oswaldo Cruz. We drove in two cars to the north end of the city where on an elevation near the sea is the principal structure of this institution, the experimental laboratory, a very ornate building four stories in height and of Moorish architecture.

The Institute was founded in 1899 by Oswaldo Cruz, who was the pioneer in cleaning up Rio de Janeiro and later some of the outlying portions of Brazil. He eradicated yellow fever and

OSWALDO CRUZ INSTITUTE

the plague by following the principles which had been put into practice by our own Gorgas in Cuba and Panama. The president of the Brazilian Republic, who was skeptical concerning Cruz' ability to carry out his promise to eradicate yellow fever from Rio de Janeiro in one year, said to him: "How can I be sure, after all the expenditure of money that will be necessary, that you will be successful in accomplishing this miraculous feat?" The enthusiastic scientist replied: "If I do not succeed, you may behead me." Within the year yellow fever was stamped out, and from that time to this Rio de Janeiro has been one of the most wholesome cities in the world. Oswaldo Cruz, who died several years ago at the age of forty-four, is a national hero. One of the most attractive boulevards of the city is the Avenida Oswaldo Cruz, and in many places may be seen portraits and busts commemorating him.

The Institute which now bears his name was planned and built by him, the government contributing toward its construction and maintenance. The necessity for such work is well illustrated by the practice of Dr. Alvaro Ramos [died 1921], one of the leading surgeons of Rio de Janeiro, who for years sent all of his pathological tissue to Munich for diagnosis at the expense of 60 marks for each specimen. Now most of the surgeons of the city send all of their pathological tissue

to the Oswaldo Cruz Institute, which has established a real school of pathology. The government appropriates one-third of the expense of its up-keep. Thirty medical men, pathologists, curators, and other scientists, are engaged in the work of the Institute. It is a great experimental center for study and teaching in connection with tropical diseases. At the head of it at present is the distinguished Dr. Carlos Chagas, the discoverer of the tropical disease popularly known as the Chagas' disease. Dr. Chagas, while in the interior studying malaria, observed another disease which was characterized by enlarged glands, anæmia, and final death. As it did not come under the head of malaria he decided that it was caused by some form of blood infection and probably from some parasite imparted by the bite of an insect. Finally, by untiring observation, he discovered that the disease was caused by the bite of a beetle-like bug which thrived in hot, unhygienic surroundings where people slept, and which pursued its work in the early hours of the morning. It deposits a parasite or organism which Chagas has isolated and demonstrated to be the cause of the disease. The individual having the disease shows the parasite in his blood, saliva, and tissues.

We were shown through the Institute in a preliminary way by Dr. Crowell. On the arrival of Dr. Chagas, he took us in charge. He is a man of medium stature, with a fine, long head, and dark complexion, who at once, from his frank, direct manner, ingratiates himself into one's being as a friend.

Another interesting head of a department of the Institute is Dr. Adolph Lutz, who is in charge of the work of preparing prophylactic and curative sera. His daughter, an attractive girl who speaks our language, is his assistant. Dr. Lutz is a serious-faced, apparently overworked man, an enthusiastic scientist, devoted to his work, and who, I suspected, thought: "What do all of these ignoramuses know about this intricate subject?" However, I want him to know that we were much impressed by his strong personality and his very interesting exhibit.

This was a red letter day for us and furnished one more thing to make us humble. How proud we all would be if such an Institute as this could be built as the first experimental unit of an international school in Panama for the study and teaching of tropical diseases, liberally constructed and endowed, and known as the Gorgas School of Tropical Medicine!

THE POLICLINIC

Policlinic

WE visited the Policlinic with Dr. Clark. It, too, was organized and is directed by Dr. Aloysio de Castro. This clinic is for the poor and deserving and is supported by the municipality. It is a substantial, four-story building located on the Avenida Rio Branco, in the center of the fashionable shopping district of Rio de Janeiro, and all but the lower store front is occupied by the clinic, its laboratory, pharmacy, operating rooms, X-ray rooms, and administration rooms. It is an artistic structure and like all public buildings in Rio de Janeiro it was built for all time of stone, steel, and marble. Its furnishings are substantial and its administrative offices and lecture rooms are elegant. The land and the building were given by the government, which maintains the clinic by an annual appropriation.

Medical cases are cared for here, and minor surgical operations that can be performed without hospital accommodations. Students from the University receive instruction in the clinic, the attendants being teachers in the Faculty of Medicine. There seems to be no special provision for the teaching of graduates in medicine.

A Private Workshop

THE private workshop of Dr. de Mendonça, the surgeon, and Dr. Clark, the internist, is a model for medicine and surgery. The building, a four-story structure with a pharmacy on the first floor, was constructed on one of the principal business streets for the exclusive use of Dr. de Mendonça. It contains an elevator and every convenience and modern apparatus for which an up-to-date surgeon and physician could wish, including an X-ray apparatus, a laboratory, and complete record files.

After our visit, Dr. Watkins made the following comments: "We saw some very good surgery in Rio de Janeiro by Dr. de Mendonça, ably assisted by his son-in-law, Dr. Oscar Clark. Much of their surgery is done under 'block' and infiltration anæsthesia. Dr. de Mendonça is a conscientious, progressive and industrious surgeon. Dr. Clark is a human dynamo, seemingly accelerating as the climatic heat increases."

Opening of the Faculty of Medicine

AT one o'clock on April 1, Dr. Watkins, Mrs. Martin and I went to the Faculty of Medicine to attend the opening of the school for the year. Dr. Watkins and I had been invited as honored guests, and we had been notified that we would be expected to respond to an address. We were met at the entrance to the building by Dr. de Castro, the director of the Faculty, and conducted to his room. There we met the director of the University, a number of the members of the Faculty, and a Dr. Solomon of Vienna, who was also a distinguished guest. Senhora de Castro, Frau Solomon, Mrs. Crowell, and Mrs. Martin were the ladies present.

Presently we filed into the large assembly room of the school, and the Faculty and guests were distributed in the seats of the raised dais facing the arena which stretched away to the patio through the open colonnades. The hall was filled with students who gave us a vigorous reception in handclapping and "Oh! Oh's!" as we found our places. The three distinguished guests were seated in front of large desks at the right of the presiding officer, Dr. de Castro, he in turn sitting at the right of the director of the University. The ladies sat opposite on the left wing of the horse-shoe of raised seats. Dr. de Castro explained in detail the occasion that had brought us together, and in the course of his talk our names were repeatedly mentioned. At the end of his remarks, which were applauded at intervals,

FACULTY AND GUESTS, OPENING OF FACULTY OF MEDICINE

Dr. Fernando Vaz, a member of the Faculty, arose, and read an address in English directed to the two American guests. At its conclusion we each responded in turn, and of course in English. My remarks, while made extemporaneously, were along the same general lines as those made by Dr. Watkins. I referred to the visit of Dr. Mayo and myself of the year before and to my return visit with Dr. Watkins as follows:

"In 1920, with Doctor Mayo, I was privileged to visit the neighboring countries of South America - Peru, Chile, Argentina, and Uruguay. Again this year, with my colleague, Dr. Watkins, I have visited these same countries, and have been greatly gratified to visit also two great medical centers of Brazil—the largest country in South America.

"In the neighboring countries and in your country we have found medical schools which equal in equipment, in teaching methods and in clinical facilities, those of the United States and Canada, and, what is of more importance, a compulsory course in medicine of from six to seven years instead of the four and five year course required by the countries constituting the balance of the world.

"Here, in the most beautiful city of the world, we have inspected, under the guidance of your honored director, your new and perfectly equipped medical institution, which now, today, we are so proud to occupy. When I return to you next year I predict that on the beautiful plot of ground across the

Avenue there will appear the foundation of a great clinical hospital, and on another a great anatomical building which will be constructed, equipped, and financed by your very efficient government. With this, your palace workshop, and with that, your clinical hospital, and with your many hospitals that already furnish you with adequate clinical material, and your great Oswaldo Cruz Institute for the study of tropical diseases, with its distinguished Dr. Chagas, the medical students of Brazil are most fortunate.

"Do you appreciate the responsibility devolving upon the medical profession of Brazil? Do you realize that the Panama Canal could not have been built if it had not been for Gorgas and his sanitarians? Do you realize what a garden spot of the world Brazil will become if for the whole country the same work is done that has been done here in Rio de Janeiro by Oswaldo Cruz, Carlos Chagas, and your group of brilliant sanitarians?

"I extend my congratulations to the students of this University. I congratulate you, the members of the Faculty, in having about you such wonderful facilities for doing your work and such a distinguished body of students. And I congratulate you, our director, for the magnificent work that you have performed for the science of medicine in this great country, and for the loyal Faculty and student body that you have collected about you to support you and to encourage you.

"And now, before closing, let me extend a sincere invitation to you all—students, Faculty, and director—to visit our United States of North America, and in doing this I wish to present the greetings of the medical profession of my country to the medical profession of the United States of South America—*Brazil*."

Two amusing incidents occurred while we were speaking. During Dr. Watkins' talk, without warning to him, the newspaper photographers exploded a flash-light which went off with a terrific report. Perceptibly he jumped; but the flow of oratory possessed momentum that would not be brooked and it went on. The sound of my strange voice and unknown tongue aroused the well cultivated voice of some mongrel dog that had wandered into the meeting room, and for fully a minute it vied with me, and at one time I thought that the cur was going to win in the contest; but I struck a higher pitch and succeeded in discouraging him in his efforts. Each of us of course received vigorous applause at the end of his talk. It was inspiring to watch the audience of students. As soon as the members of the Faculty were seated the students left their

chairs and crowded forward and stood, completely filling the arena in front of the Faculty group. They were a fine, brilliant lot of young men, and they seemed to be keenly interested in the speeches made in an unknown tongue by the guests.

Dr. Marinho made an address in German to Dr. Solomon and he responded at considerable length in French. After a few other formalities we went to an upper room in the building and were served with coffee, ices, and *patisserie*, drank several toasts and then, with the Faculty and the ladies, were duly photographed.

We later drove to our hotel, relieved ourselves of our long-tailed coats and silk hats, and at four o'clock were taken by Dr. de Castro and Dr. Clark for another ride to the wonderful Tijuca. The day was perfect, the afternoon sun making more beautiful the winding roads and bridle paths in the mountain valleys. One can never tire or solve the mysteries of this excursion in the hills. It was particularly delightful to have these new friends as guides and to have them point out the beauties which appealed to them. It is like life, this exploration of these intricate natural beauties, one receives from it according to his tastes, his standpoints, and his ability to appreciate.

A Surgical Clinic

APRIL 4. Visited the Misericordia Hospital, the large municipal institution with several hundred beds, and witnessed an operation by Dr. Alvaro Ramos [died 1921]. The case had been well worked up and the records were read and translated to us. The diagnosis was a "retroperitoneal cyst of the middle abdomen." The written records shown to us in this hospital would have warmed the heart of the committee on hospital standardizaton of the American College of Surgeons. Ether anæsthetic was administered. The cyst was exposed and rolled out, and proved to be a tumor of the mesentery. It was skillfully handled and we could not but be pleased with the correctness of the diagnosis. Dr. Ramos was a skillful surgeon. His technique was that of the French, and of the character that one would approve for an operation upon himself. These are capable, daring operators. Dr. Ramos showed us his wards, large airy rooms, the laboratories, and the large outdoor dispensary containing hundreds of waiting patients.

Strangers Hospital

WE then drove with Dr. Ramos and Dr. Franklin P. Pyles (an American surgeon) to the Strangers Hospital, the English hospital, built in an attractive location on a hill over-

looking Botafogo Bay. With Dr. Ramos we also inspected a large insane hospital in which he had a surgical service. We then visited his home, a commodious residence on a fashionable street, where we viewed his extensive library. Three large rooms, filled to the ceilings, were required to accommodate the books and pamphlets. Dr. Ramos was proud of this library, and he may well have been. He had English, German, French, Spanish, Italian, and Portuguese journals and text books, all of which he read. I was gratified to see that *Surgery, Gynecology and Obstetrics*, in files from the beginning, occupied several shelves, and that he had taken the *International Abstract* from the journal proper and made separate volumes of it. He took pains to show us a number of copies of the *Journal of the American Medical Association* which contained the articles on South America written by Dr. Nicholas Senn fifteen years before.

Luncheon with Dr. Chagas

AT twelve o'clock Dr. Watkins and I with our wives were guests at luncheon at the home of Dr. Chagas. This gave us another opportunity of visiting a Brazilian home. Dr. Chagas, who speaks some English, and his charming wife, who speaks more English, and an attractive son of seventeen who outstripped them all, were our hosts. Dr. and Mrs. Crowell and one other couple were also guests. We had a delightful hour. This scientist has a charm of manner that is irresistible, and an expression of adequacy and extreme modesty.

An Emergency Operation

ON one of the early days of our visit to Rio de Janeiro, Dr. Clark called for us in the edge of the evening to see an emergency appendectomy which Dr. de Mendonça was to perform on one of his students. He was to operate in a strange hospital. Everything was new to him, and besides Dr. Clark, who was acting as first assistant and who was giving the ether anæsthetic, he had but one assistant in the operating room.

The case was a difficult one, with a retrocæcal gangrenous appendix. The operation was carefully and skillfully performed. We were grateful to this great surgeon for calling us to see an emergency operation that was to be performed in a strange environment — which always takes courage and shows that the operator has the courage of his convictions.

April 5. Visited a well equipped hospital which had been the residence of a wealthy citizen, and which was located in an

extensive private garden. It is exclusively for maternity cases and attendant ills. We were met by Dr. de Castro, the director of the Faculty. We saw an abdominal section for a retroversion, and a Gilliam operation, skillfully performed. The operating technique was conventional and good.

We then drove to another Maternity Hospital, where we saw Dr. Magalhães, a handsome man with the face and appearance of our own Marion Sims in his younger days. He showed us his hospital and we saw him do an interesting operation on an ovarian cyst. There has been an attempt to screen this hospital under the inspiration of a South American who recently visited North America, but it has been a failure because instead of placing a large screen on the outside of the large window casing in a position not to interfere with the opening inward of the French windows, the glass panes had been removed from only one or two of the window lights of the French windows and screens inserted. To make the screens effective, the windows must remain closed and the air is excluded. If the windows are opened, as they should be most of the time, the screens are of no use. It was evident, of course, that the screens were not a success and had failed in practice to popularize themselves.

April 6. Witnessed an operation by Dr. Pyles at the Strangers Hospital.

A Nose and Throat Specialist — Dr. João Marinho

APRIL 7. Inspected an office building, built and equipped by Dr. Marinho, a nose, throat and ear specialist, as his exclusive office work-shop. The building is four stories in height, and about twenty by thirty feet in area. An elevator connects all floors. The building is utilized as follows: First floor—reception room with office attendant, and recording room; second floor—clinic for people who can pay nothing or very little, fully equipped with several stalls where he and his assistants work several hours in the morning of each day; third and fourth floors—offices for private patients and extensive laboratories; fifth floor—an assembly room, with projectoscopes, lanterns, and other equipment for teaching and demonstrating to groups. The building occupies a site in the center of the business section of the city. It is constructed of stone, steel, and glass, and contains the latest type of modern office equipment imported from Europe and America. The builder of this palace workshop is a charming man, and is one of the

distinguished teachers in the Faculty of Medicine. He is about forty-five years of age, full of enthusiasm, and devoted to his work. He speaks some English, and has promised to visit the United States.

THE *VANDYCK* CRUISE

FROM the Log, 1923. Regretfully, because of loss of time, we skirted the great breast of Brazil, by the mouth of the greatest river, and down by its old cities of Bahia and Pernambuco, which we could not visit at that time, and kept our appointment in the most beautiful city of the world. We cast anchor at Rio de Janeiro on the morning of March 7 and were met by representatives of the Government, Ambassador Edwin V. Morgan, members of the medical profession and of the Brazilian Exposition. In accordance with the program which had been arranged, President Arturo da Silva Bernardes, assisted by his officials and Ambassador Morgan, received all of our people at the Executive Mansion, and made us happy by consenting to photographs and a motion picture scene that will enable us to preserve a valuable record of the reception.

That evening a brilliant ball was given at the new Gloria Hotel, where in resplendent informality we were greeted by Senhor Doctor João Luiz Alves, the Minister of Justice. We danced away the evening in this beautiful ball-room, from the windows of which we could observe Sugar Loaf and the many undulations of the bay, outlined by beads of electric lights, in the center of which was emblazoned in splendor the Exposition.

Guided by that most splendid of all hosts, Carlos Chagas himself, the distinguished director of the Oswaldo Cruz Institute, a large group of our Fellows wended their way early the next day to the Institute, where we feasted on the scientific display and on the very delightful repast that he had to furnish us.

That afternoon, although a number of our party had been drawn away by the physical attractions of Rio de Janeiro, we visited the medical school. This was one of the most attractive receptions that was accorded to us. The members of the Faculty were in academic dress, resplendent in color and dignity, and made us regret that we had not come in our Fellowship gowns. In the great patio of the quadrangle that represents the buildings of the college, was a large military band which regaled us with inspiring music while we visited the

marvelous institution that has been so completely planned by Dr. Aloysio de Castro. Then in a brilliant convocation hall, in the presence of the students, distinguished guests, and our own people, Dr. de Castro greeted us by an address in English, to which our acting president, Dr. MacDougall, responded. Refreshments were served, and after surveying the building and classrooms, we departed, filled with admiration for their most comprehensive place of learning.

That evening the Academy of Medicine of Rio de Janeiro entertained the Fellows of the College and their wives and friends at the Exposition, and in the brilliant Palace of Festivals at 9:30 o'clock we held a formal medical meeting, attended by the members of the College in their Fellowship robes. It was a brilliant gathering. Professor Dr. Miguel Couto, president of the Academy of Medicine, presided and with him on the platform were several prominent Fellows of the College in Rio de Janeiro, the officials of the College, and the essayists of the evening.

At the conclusion of the address of welcome by the president of the Academy of Medicine, he conferred upon the acting president and the director-general of the American College of Surgeons the Honorary Fellowship of his Academy, and presented to each of us a handsome medal as tangible evidence of the honor.

This was followed by the formal program, which included papers on surgical subjects by Dr. José de Mendonça, of Rio de Janeiro; Dr. F. N. G. Starr, of Toronto, Ontario; and Dr. John Osborn Polak, of Brooklyn, New York.

The distinguished Dr. Olympio da Fonseca, general secretary of the Academy of Medicine of Rio de Janeiro, was presented for Honorary Fellowship in the American College of Surgeons by the director-general. The candidate was received by the acting president, who conferred the honor upon him.

Dr. Fernando Vaz, of Rio de Janeiro, presented the following address to his colleagues from the North:

"Among the hospitable countries, Brazil proudly occupies one of the first places, and, in most cases, those who visit it do not feel ill at ease in spite of its enormous territory and the difficulty of its almost unknown tongue. Among its inhabitants, mutual trust is proverbial. Those who have had the privilege of visiting the inland, and have had occasion to have personal dealings with our farmers, know that no one knocks at their door, asking for food, lodging, or information, who is not received with open arms and treated with entire

disinterestedness. The Brazilian, as a general rule, gives what he has without expecting any return. This natural trait of those who live in the interior is transmitted, without any change, to its centers of greater culture, where, in spite of material progress, selfishness, which dominates a great part of humanity, does not always find lodgment.

"If you will take the trouble to look into our history, you will have occasion to verify the truth of this statement. You will see, for instance, that those who govern us have a tendency to side with the weak and the oppressed. They refuse many times the possibility of great compensation, so as to be on the side of justice and right.

"What is the cause of such a tendency?

"It is because Brazil has always lived surrounded by people whose chief object in life has been cordiality. From its beginnings as a nation it has tried to be a defender of peace and in favor of great ideals, maintaining among its inhabitants mutual confidence, which is indispensable to mutual understanding, as also to the progress of the country.

"It is this sentiment that we Brazilian physicians zealously cultivate, perhaps more so than any other class of workers. This is the reason why the majority of Brazilian physicians place above their own personal interest the health of their fellow beings, and maintain the profession at the highest possible standard of professional honor.

"Our physicians and surgeons count it a great pleasure to be able to prove to those who as yet do not know them this quality of character in their profession, which, to speak candidly, is only a reflex of a general trait in our race.

"In expressing this fact to you, my dear colleagues, you who understand the nobility of such an ideal, our hearts overflow with legitimate pride in finding ourselves in your company, you, whose greatness of soul has such a close affinity to ours.

"Whatever be the prism through which one looks at your actions, altruism is always your dominant characteristic; and those who know you well, know that in your country those who suffer do not fear adversity, because your millionaires do not forget to divide of their abundance with those less fortunate.

"None among us but has heard of the lavishness of Rockefeller, or of the work of Peter Bent or Robert Bent. If we tried to mention other cases, it would be very difficult to choose who should have the preference. As proofs of your altruism, it is only necessary to call attention to your universities, your colleges, and your hospitals (both in the homeland as well as

abroad, and of which we, in Brazil, have such visible proof in the great Baptist institutions, so nobly fostered among us).

"This is the reason why we feel at home with you. We bid you welcome, gentlemen, to this land of proverbial hospitality.

"Every time good friends come to see us, or other countries send to our shores some special envoys who represent the glories of their country, we feel under obligation, and if unable to return in any other way, we try at least to express our sincerity in words. You may be sure that if your presence in this hall is a great pleasure to all Brazilians, it is a yet greater pleasure to the one who is at this moment addressing you.

"Never can I forget your country, the kindness of your people, and your simple life, both of teachers and pupils. I never would have attempted to speak to you in your own language, were it not for the great friendship that I feel toward you. In your country, instead of the oligarchies full of disdain that unhappily still exist in some scientific centers, there prevails a powerful democracy, where all may be sure of finding a place according to their personal merits, be their origin or position what it may.

"Your presence here is certainly a great satisfaction to me. I cannot but speak again of the personal interest manifested by William Mayo, one of the most prominent men of your country, who, after a visit to our part of the world and hearing of our presence at his clinic, received us with his characteristic courtesy, and inquired particularly into the real conditions of our life, about our schools, our men, and our science. Upon leaving his home I was sure of having done a great service to my country, offering to that eminent spirit the seed that is now bringing forth fruit.

"Since then I have followed closely your program. Your efforts in remodeling the hospital service demand the united forces of each and every one in the marvelous work which you are planning to do.

"There is no need for us to speak of the powerful influence that the surgery of your country has had upon us. In this country, as well as in other countries, your names are highly esteemed. There is no Brazilian surgeon who has not heard of the work of Howard Kelly, whose value as a scientist is recognized in all of our books, and whose technical knowledge cleared the ground in matters of gynecology. The writings of Charles and William Mayo on gastro-intestinal surgery; of Young on surgery of the prostate gland; of Cushing on surgery of the hypophysis and of the auditory nerve, are true milestones that will make their names honored for all time.

"I now wish to present to you the little that I have been privileged to do.

"In our private practice, I try to introduce all the improvements that are at our disposal. Although we do not have the riches of some of your clinics, as we depend entirely on our personal resources, yet we have the means necessary for good surgery.

"We are as yet not able to show you a model hospital, active in all of its various departments; but I wish to show you one that is just now beginning, and for which I have been doing my utmost, planning to introduce there all the good things that I saw with you. I refer to the surgical department of the Hospital of San Francisco de Penitencia, which will be built in one of our best suburbs, in the mountains of Tijuca. The land has a frontage of 240 meters, and is a plateau extending along the mountains. The building will occupy the first elevation, and will measure 90.90 by 73 meters.

"In the left wing a complete section will be given over to baths, rooms for massage, for mecano-therapy, for X-rays, and so on; in the right wing will be the store-room for surgical materials, the office, pharmacy, and the quarters for internal service; in the center will be stationed the stretchers.

"The first floor will be reserved for septic surgery, and will have in each wing three wards, each containing ten beds, one ward for specially dangerous cases, and at each end recreation rooms.

"On the second floor there will be an extensive circular gallery that will communicate with a special gallery enclosed with glass, reserved for aseptic operations and accessories. There will be found baths, a room for preparing the sick for anæsthesia, sterilizing room for the physician, surgical arsenal, and room for all the necessary articles and accessories for sterilization for the whole hospital, and also the office for the head nurse of the surgical department; at the side, small wards for the cases recently operated upon, private rooms, dining rooms, etc., etc.

"The third floor will be reserved for laboratories, museums, library, and refrigerating apparatus for cooling the operating rooms.

"Besides this, in the hospital of San Francisco de Assiz, where it is our privilege to direct the general surgical service for women, a great number of improvements have been introduced, due to the opportune initiative of the illustrious director of the Public Health Department, Dr. Carlos Chagas. In that institution, where each surgeon is permitted absolute

autonomy in the exercise of his clinic, a school for nurses has recently been established under the direction of American nurses. Miss Keeneger, one of your country women, the head nurse, is doing her utmost, so that before long we may have a goodly number of graduate nurses. Then, also, a perfect and systematic examination of all anatomo-pathological material of the hospital is made in the laboratories of the Institute of Manguinhos, where, as you know, we have a group of capable anatomo-pathologists.

"In this movement we are not the only ones, for, before long, you will hear of other similar undertakings, promoted by colleagues who are residing in this metropolis as well as in other parts of Brazil.

"If to all of this we should add that both our federal and municipal governments are thinking seriously about the hospital problem of this city, for which your example has been such a powerful incentive, you will have a more succinct idea of what constitutes our program.

"As you will readily see, the program of the American College of Surgeons, of which you are such worthy representatives, has been one of the subjects of our daily thought. With the objective in view of elevating still more the surgical profession, you try to introduce uniformity into your service. Uniting under the same flag what you have of the best in your profession, promoting in your clinics the autonomy necessary to a conscientious surgeon, you offer, to those who trust their lives into your hands, all of the advantages of a timely and efficient surgical intervention.

"Working in the midst of a complete organization for the study of the sick, you awaken in the professors the desire for greater progress, and in the students, love for and dedication to the profession they have adopted. Placing yourself in condition to practice applied surgery, on the basis of pathology, hygiene and physiology, you offer to those who desire your services real lessons in those things in life, the influence of which tells upon the medical profession in general.

"It is not necessary to emphasize the sublimity of your ideal, nor the finesse of your generosity in extending, even beyond your frontiers, the benefits of your efforts. Calling into your guild the whole family of American surgeons, and trying to organize them into one strong and powerful body, the objective of which is to work on behalf of suffering humanity, you give once more an example worthy of imitation. Your initiative eliminates from American surgery the excessive centralization that has been so prejudicial to every good movement in

medicine. Your College, with its great prestige, will enable all to combine in one strong, intelligent, and willing effort. You can, therefore, rest assured that you will find here our heartiest support in the task which you have undertaken.

"I would like to say a great deal more, but the time allotted to me will not permit."

During our two days of brilliant entertainment in Rio de Janeiro, many of our ladies and Fellows stole away and enjoyed the wonderful sights and interesting places of Rio de Janeiro. On Friday and Saturday of the week some of us took occasion to seek out their clinics, their hospitals, and other things of interest to the medical mind. The beauty of Rio de Janeiro was everywhere about us as we pursued our rapid pace. And here, busy showing us the high spots, were our old friends, the Fellows of the College, and always at our side, strenuous as ever, was Dr. Oscar Clark. On Friday a number of us visited Petropolis, and enjoyed a survey of this summer capital, a visit to some of our friends of old, and the acquaintance of new friends of value.

On Saturday, March 10, our party divided. Some of our members traveled by railroad across country to São Paulo, the great coffee state of Brazil, and the others continued on our ship to the port of Santos, the coffee outlet for São Paulo and the surrounding country, where we again joined our forces. Sightseeing was our principal object on this part of our trip. At São Paulo, however, our hosts of other years, members of the College and local officials, urged upon those taking the inland trip and those who would make the two-hour railroad ride from Santos in response to a hasty invitation, to partake of an elaborate and beautiful banquet which was given at the famous Automobile Club in São Paulo.

The following morning a number of our Fellows attended clinics at various hospitals, and here they were able to judge of the excellent scientific work of the surgeons of São Paulo. An invitation to attend a reception by the governor, extended through our gracious host, Dr. J. Alves de Lima, had to be regretfully declined because of the inability of all of our people to get together.

RIO de Janeiro, as we crept again into her beautiful bay in the early morning of March 28, after several weeks in Montevideo and Buenos Aires, was revealed to us in all of her great glory. The mists and clouds had disappeared, and the shore line, the mountains, and the terraced city lay invitingly before

us. A schedule of clinics greeted the insatiable surgeons, and the shops and places of beauty beckoned to the shoppers and sightseers. All of our friends were there to welcome us, and before us were two days for thorough enjoyment of this most beautiful city of the world. On the second day, with the hosts impressing upon us their genuineness of friendship, our ship once more sailed forth, and we were truly on our way to our own homes in North America.

CHAPTER XIV

GENERAL OBSERVATIONS

DR. MAYO — SUMMARY OF HIS VIEWS

I HAVE been asked a number of times, "Do you mean to say that all the surgeons of South America are of this high grade you speak of?" I can only answer that all the work I saw was high-grade, but I saw only the best men, and not by any means all the best men. Relatively the comparison with other countries is a fair one. As I have traveled at home and abroad year after year to see surgical work and to learn surgery by direct observation of the surgeons and their clinics, I have seen only the best. And why should I do otherwise? If I wanted merely to see bloodshed, that could be seen at the stockyards; if I were looking for poor work, that could be seen at home as well as abroad. Since the object of travel is primarily self-improvement, time should not be wasted looking for things done badly and for things to criticize.

I learned much in the short time I was in South America, not only of surgical conditions as they are seen in the United States, but of the surgical complications of so-called tropical diseases. Many of the diseases are tropical in the sense that they exist as yet only in the tropics, probably because easy means of communication to other countries have heretofore been lacking. In the future we can expect them to spread from one country to another. Such diseases are to be found in the northern islands of Japan under climatic conditions similar to those in the northern part of the United States and in Canada. There is a rare opportunity for our medical men to study these diseases in South America and to learn from the experience of the medical profession there how best to care for them. In like manner the physicians of South America may learn from us with regard to the forms of phases of diseases in North America. Exchange of professors and exchange of students will mean much to the health conditions of both countries. The medical profession of South America will be glad to undertake such co-operation. The Spanish edition of

The Journal of the American Medical Association is having a great deal of influence in establishing closer relations between the medical profession throughout Central and South America.

THE DOCTORS

By Dr. Watkins

THERE are some features about the doctors of South America that are very interesting. Sons of rich families often study medicine and become leaders in their profession. The doctors we met are voluminous readers. They read more French, German, and Portuguese than they do English, and yet they are very conversant with our literature. Dr. Montenegro of São Paulo modestly said: "We have to read much as we produce nothing." *The Journal of the American Medical Association, Surgery, Gynecology and Obstetrics*, and some of the English medical journals are commonly read in South America. Many of the doctors work hard and sustain a keen scientific interest under what would be to us very trying climatic conditions excessive heat and moisture. This keen scientific interest was especially noticeable to me in Montevideo, São Paulo and Rio de Janeiro.

MEDICAL SCHOOLS

By Dr. Martin

WE visited medical schools connected with the national universities at Lima, Santiago, Buenos Aires, Montevideo, São Paulo, Rio de Janeiro, Havana, and Caracas. A primary, high-school, and university education is required by the medical schools for the admission of students. Peru, Chile, Brazil, and Argentina require a seven-year course of medicine, while Uruguay requires but six. So far as we could judge them in our cursory visit, the physical properties of each of the schools were adequate and modern in every detail. Judging from the provision for free hospital beds in so many of the hospitals of the cities in which the schools are situated, which are under the control of the faculties, the clinical material should be abundant. The laws of each of the governments provide for a reasonable distribution of dissecting material, and postmortems are an accepted requirement. Our opportunity for meeting a strong group of each faculty was most favorable, and if the faculty as a whole approaches in point of ability the members with whom we became acquainted,

the faculties are exceptionally strong. While it was vacation time and the medical schools were not operating at full capacity, we had an opportunity of observing and meeting a large number of students and a larger number of recent graduates who were serving as internes in the hospitals, and I am sure we were agreed that in appearance they compared favorably with those of the United States, Canada, and England.

The leaders of the faculties are men who have supplemented their home training by study in France, Germany, or other foreign countries, while a few have been in the United States. One cannot but realize that these medical schools are built on sound, fundamenta bases. However, it was not possible for us in a short visit during the summer vacation season to judge of their present teaching value.

I wish that all of our friends could know as we do the outstanding characteristics among their maturer men, who are so honored and looked up to by their younger followers and admirers—Gregório Amunátegui, Alberto Adriasola, and Lucas Sierra, of Chile; Marcelino Herrera Vegas, Daniel J. Cranwell, and Pedro Chutro, of Argentina; A. Ricaldoni, Enrique Pouey, and Gerardo Arrizabalaga, of Uruguay; Juvenal Denegri, Miguel C. Aljovin, and Guillermo Gastañeta, of Peru; José de Mendonça, and J. Alves de Lima, of Brazil.

MEDICAL SCHOOLS

By Oscar Dowling, M.D., New Orleans, La.

THE most gratifying result of the trip, to my mind, is the wider knowledge which was gained of the excellence of the medical colleges of the countries visited. The medical course in all of the schools consists of six or seven years' training. With one exception, Cartagena, the colleges are well equipped, and have excellent laboratory facilities. In Cartagena two years of the course are devoted to tropical medicine and diseases, and sanitation.

In the medical school in Caracas there were three hundred students, sixty in the senior class. Their training in tropical medicine and sanitation is obtained in the hospitals.

Brazil has five medical colleges, an Institute of Tropical Medicine, and there is to be established a special School of Preventive Medicine. All kinds of biological products, except salvarsan, are manufactured in the Institute, including snake-bite serum. Large quantities of these products are exported. A library, printing plant, and a box factory are part of the

facilities of this institution. São Paulo has a modern laboratory at the snake farm where biological products are manufactured. They specialize in serum for snake bites.

The medical college of Buenos Aires occupies an entire square of ground with complete equipment and an extensive library. This college has medical, dental and pharmaceutical departments, and a school for midwives. At present there are 4,000 students enrolled, many of whom are women. The laboratory, owned and operated by the Republic, is the most complete in the world. It is three stories high, built of stone and concrete. All biological products are made here, and they are dispensed free of charge. This laboratory produces over a million dollars worth of products annually. Ample funds are provided by Congress and it receives large amounts from private sources.

The medical department of the University of Chile, at Santiago, has fine buildings, a large lecture amphitheater, modern anatomical rooms and a good library. There are twelve regular professors and forty-five assistants. Dr. Arturo Alessandri, the president of the Republic, is greatly interested in medical progress. With the Federal Department of Health he has written a new sanitary code.

The buildings of the medical college of Lima, Peru, cover several squares. The departments are well equipped, and there are many able men on the faculties of medicine and dentistry.

The medical men in charge of the medical colleges, and those we met engaged in public health work, were, without exception, cultured, scientific-minded, and enthusiastic in the cause of progressive medicine. To find the medical schools models of perfection, and the standards for the students as high as our own, was an agreeable surprise and an incentive to further efforts in behalf of our own colleges.

This tour, conducted under the auspices of the American College of Surgeons, is one of the most significant events in our medical annals. It implies an exchange of thought and ideas with the great medical colleges of the southern countries and a better understanding of the health problems of the world. It further implies more extended relations, medical and commercial, between the countries of the two continents which will be of reciprocal advantage.

HEALTH SITUATION

By Dr. Dowling

DURING the 1923 cruise of the American College of Surgeons facts were gathered concerning the health situation in fifteen cities of seven South American countries: Cartagena, Colombia; Caracas, Venezuela; Rio de Janeiro, São Paulo and Santos, Brazil; Buenos Aires, Argentina; Montevideo, Uruguay; Santiago, Valparaiso, Antofagasta, Mejillones, Iquique, Arica and Tacna, Chile; and Lima, Peru. Conditions in Havana, Cuba; Port of Spain, Trinidad; and the Canal Zone were also noted.

Figures show about the same percentage of tuberculosis, typhoid, smallpox, syphilis, gonorrhœa, and malaria as with us (except on the dry west coast and in a few places which have been drained). Considerable trachoma and leprosy exist, and in a few places, hookworm disease. The endemic tropical diseases are comparatively negligible as compared with those with which we are familiar. With the exception of a few cases of yellow fever in two cities of Brazil, where active measures were being taken similar to those followed in New Orleans in 1905, there was no plague, no cholera, and no yellow fever. Incidentally, it may be of interest to add that they have had no plague in Rio de Janeiro since 1910, and no yellow fever since 1907; in Buenos Aires, no plague for 5 years, and no yellow fever for 30 years. This is excellent evidence of effective control measures. The facts justify the conclusion that the health situation in the various countries is similar to our own.

In some communities a large percentage of the babies die under one year of age. Commenting on this one of the leading papers said: "Ignorance is the chief cause of infant mortality. To control this, well-prepared nurses of intelligence and initiative are necessary to teach the mothers and the public." In almost every place visited the supply of good milk is very limited. Were this provided, with teaching by the intelligent trained nurse, the death rate among infants would be materially reduced.

Some of the outstanding impressions concerning communicable diseases are: Extreme precautions to prevent smallpox, compulsory vaccination, and maritime quarantine against this disease with strict enforcement of regulations. Other contagious diseases are controlled more or less effectually by methods similar to those in effect in the United States. The value of educational work and demonstrations of control are emphasized.

In Port of Spain, Trinidad, epidemic diseases are divided into dangerous and non-dangerous, and the dangerous cases are handled exclusively by the government. In case of plague the house is burned and the owner is compensated.

Brazil is spending $2,000,000 in a hookworm eradication campaign, which appropriation is matched or supplemented by the Rockefeller Foundation.

It was interesting to note that in thirteen cities the water supply was brought from a distance—from the mountains, pure and wholesome, or from artificial lakes. The water supply of Rio de Janeiro comes from the mountains forty miles distant; sheds protect the water, making treatment unnecessary. The supply for Buenos Aires comes from the river fifteen miles above the city. The system is the same as that in New Orleans. In Lima, Peru, the water is from springs and is settled, filtered, and chlorinated; the system is now being rebuilt. In the little city of Mejillones, Chile, the water is condensed and sold by the railroad shops at ten cents for five gallons; in Iquique, Chile, a city of 40,000, the water is wholesome and abundant but expensive; they are hoping soon to have free water.

Modern methods of waste disposal were found in several cities. In Rio de Janeiro, sewage is treated chemically before it is emptied into the sea; in Buenos Aires the sewage is carried fifteen miles down the river and emptied below low water mark.

Incinerators are used to dispose of garbage, which is collected in covered wagons and carts. In Panama, under the direction of Dr. Henry Goldthwaite, the incineration of garbage, except certain light waste, has been abandoned because of expense and odors from the plant, and they now dump the garbage for filling purposes. The garbage is sprayed, to saturation almost, with a larvacide and then covered with a layer of bags or old carpets and over all three feet of earth. This earth is sprayed for ten days. By this means objectionable odors are avoided, flies do not breed, and rats are not harbored. This method has proven satisfactory and economical. It is stated in the report of the Special Panama Canal Zone Commission, made to the Secretary of War: "We know of no city in the United States that is as clean as Panama, nor where the flies and mosquitoes are so scarce. . . . The alleys and yards are as clean as the main streets." These same conditions apply in general to the Canal Zone.

In Santos, Brazil, a city of 40,000, every house has water, sewerage facilities, gas, electricity, and a telephone. This is

the more striking when it is remembered that 70 per cent of the population is engaged in manual labor.

Dairy cows must be tuberculin tested in Havana, Panama, Rio de Janeiro, Buenos Aires, Antofagasta, and Lima. The entire time of the force in one laboratory of Rio de Janeiro is given to examining and testing of milk. Port of Spain, Trinidad, uses a large amount of condensed and powdered milk. The rules of a private dairy in one city are so strict that a visitor is not allowed to enter the dairy until his shoes are washed in an antiseptic solution.

I was impressed with the need for a revision of maritime quarantine regulations. The civilized countries of the world have put into practical effect scientific discoveries for the control of certain communicable diseases. Many great ports have been freed from bubonic and other plagues and, in justice to them and because of the need of commercial expansion, there should be international quarantine laws which would take into account the convenience of the traveler and the extension of social and commercial relations. There should also be provision whereby public travelers may be assured that the ship or train is supplied with potable water.

HOSPITALS

By Dr. Martin

THE hospitals in South America, not unlike the hospitals in other civilized portions of the world, may be divided into several classes. One of the objects of our trip was to obtain a bird's-eye view of the hospitals in the cities we visited. We passed through, very hurriedly of course, a number of the principal hospitals in each of the capitals, Valparaiso and a few other cities. With only minor exceptions, they all had suitable buildings and interiors, and opened onto extensive and attractive gardens or patios. Without exception, I believe all of them have a system of case records, and the average of completeness in this respect was above that found in the United States. Everywhere working laboratories, including X-ray outfits, were in evidence and were pointed to with pride. The operating rooms, with but few exceptions, were modern, and contained the most approved sterilizing apparatus. Conveniences for diagnostic purposes, and instruments for operating rooms were in abundance. Nearly all had provision for postmortems, and up-to-date morgues. The provision for graduate internes seemed to be adequate, especially in those

hospitals connected with teaching institutions. Almost all of the large hospitals had rather complete out-door dispensary departments. Some were deficient in modern plumbing; but a large percentage of the important hospitals were elaborately equipped with these conveniences. Some had the most approved hydrotherapeutic departments, and modern laundries and kitchens were in evidence in nearly all of the larger institutions. The hospitals which did not have the full equipment as enumerated above were not a few, but nearly all of these are in line for a rapid readjustment. Especially is this true since their teachers are thoroughly alive to the requirements of a modern hospital.

Two defects which were evident were the lack of screening against flies, mosquitoes, and other insects, and a well organized system of nursing. The former of these will soon be remedied, but the latter is a difficult problem with which the faculties are wrestling. It was not a defect pointed out by us, but a fact freely admitted by our hosts.

The Modelo Instituto Clinica in Buenos Aires may well be taken as a model for all hospitals built in a similar climate. It is one of the most beautiful from the standpoint of architecture and grounds, and its equipment, as far as we could judge, with the exception of the nursing organization, is complete in every detail. It was built as a model by the government of Argentina, and is maintained as such, which fact evidences the yearning of the people and the profession of this country for the best that can be devised. This hospital is also completely screened.

HOSPITALS

By Dr. Salisbury

ONE of the dominant features of a visit by medical men to our neighbors to the South is the study and observation of their medical institutions; and not the least interesting among these are the hospitals.

In comparison with our own great hospitals we can offer a criticism or two, constructive perhaps; but on the whole there is much to admire and to praise, and there are many things worthy of imitation.

The Latin American hospitals are sustained in much the same way as ours of the North. The government probably comes first in the support of hospitals. By government I mean either the central power or the state. The municipality as a rule does not maintain hospitals. This is due to the system of revenues

and tax impost, which are collected by the central government. And indeed in many instances one or two port cities support the whole country. Appropriation is then made by Congress to finance the public institutions of the several cities. This system has given rise to a lack of civic spirit, as in every improvement and in every public innovation the cities look for governmental aid. Therefore, the greater number of hospitals are state or federal institutions.

The *beneficencias* are next in importance in the support of the hospitals. They are beneficent associations which derive their funds from contributions and endowments by public-spirited citizens, from legacies, from the revenues collected by theaters, lotteries and the like, all of which are often supplemented by the government in the form of allotments to cover any deficit in the budget or an allowance of a certain percentage of duty collections on a given commodity or luxury.

Foreign colonies maintain many institutions such as the French, Spanish, Italian, German, British, and North American hospitals, which receive support from their respective colonists and are conducted as pay institutions. A discount is allowed to the members of the hospital association, and free treatment is given to the poor of the respective colony.

Another type of hospital is the private sanatorium or *Casa de Salud* (House of Health), usually conducted by individual doctors or groups of specialists who form a partnership.

The first three types of hospitals, as a rule though not in every instance, maintain paid staffs, from the chief of staff to the visiting and resident physicians and surgeons. These posts are sought often from the monetary standpoint, while the work is "farmed out" to younger men looking for experience under capable instructors. Of course, a paid staff is a great drain upon hospital funds that would be available for other uses and extensions if the system common to us prevailed.

The pay departments of the public hospitals and of the private hospitals are usually open to any reputable physician or surgeon who wishes to take patients into the institution.

The administration of the hospital is left to a board, or *junta*, of individuals, usually including members of the medical profession who are locally interested in public welfare. This board appoints a superintendent and assistants, matrons, nurses, attendants, etc. Often Sisters of Charity or of the other religious orders supervise the hospitals; but nowhere are hospitals conducted in buildings that are the property of the sisterhoods as is the rule in the United States and Canada. This

custom may not have prevailed originally, but the property of religious orders has since been taken over by the state, and the sisterhoods are allowed maintenance and pay for the services of their individual members who do charitable work.

Training schools for nurses, with two or three year courses, exist in many of the hospitals. In some cities only one hospital has an accredited school which supplies nurses to the other institutions.

The hospital buildings are commonly one-story structures with high ceilings, well lighted and ventilated. Each ward is a distinct building and is separated from the other units by garden courts which add beauty and charm, and give surroundings that materially aid the patients in convalescence. The wards are connected by verandas which make for service and efficiency. Occasionally the hospitals are built on the isolated pavilion, or Virchow, plan with subterranean connections, as with the Pereyra Rosell Hospital of Montevideo, and the Calixto Garcia Hospital of Havana. In the latter the original plan to connect the buildings has not been carried out, and there is difficulty in moving patients, food, linen, etc.

In almost every instance the equipment in the hospitals, especially in the operating sections and laboratories, is modern and adequate in every way. A custom common to most of the Latin American institutions, perhaps because of the absence of nurses, is the peculiar system in regard to drugs. By far the largest department of the hospital is the drug store. A large force is maintained in each, and all pharmaceuticals are manufactured on the grounds; drug mills, mixers and elaborate machinery are ever present in the *Botica*. From 300 to 1200 prescriptions are filled daily and the several remedies for the patient are placed at his bedside in lieu of a set of standard formulæ at the nurses' desk.

The kitchens of all the hospitals are examples of neatness and cleanliness, and apparently good, wholesome food is served. The beautiful white-tiled kitchen in the Central Hospital of São Paulo, with its battery of large steam cookers and open hearth grills, is typical of any modern culinary department found in the North.

Screening has been neglected in most of the institutions visited, and goodly numbers of flies were in evidence. Most of the wards were overcrowded, and it appeared that this was due not so much to the number of acute cases as to a certain oversight in discharging patients who are able to leave the hospital. In late convalescence they hold many patients longer than we would do ordinarily.

Interesting, indeed, is the history of the hospitals of our southern neighbors and the transition that has slowly taken place during the centuries. Every hamlet had and has today its hospital, something that cannot be said of our own country. A century before the Pilgrim Fathers landed at Plymouth, Panama had its hospital; but that was destroyed by Morgan when he burned the city. Two decades later, just 380 years ago, Bras Cubas "Fidalgo do Puerto Portugues" established "La Santa Casa da Misericordia" in Santos, Brazil.

From their resting place in the safe, the *Administrador* of this hospital brought forth and showed to me the original *compromisos*, or articles, written in old Portuguese, establishing this ancient hospital. Parts of the old buildings are in use today. The history of this hospital is the common story of all. Many began in monasteries and a section was set apart as a hospice, hence the name hospital. Daily the poor or travelers came for food. If they were sick they were taken in. As the monks were skilled in the treatment of wounds, they were sought by the *conquistador*, the soldier and the mariner. Later the sisterhoods came, and the Sisters being by nature better adapted to the care of sick and indigent, the institutions became almshouses and sheltering homes. As time went on these places "specialized." Some became orphanages and some asylums for the aged or for the insane; something of a hospital was left for the sick. None but the poor entered, as the better classes were treated in their homes.

Then came the wars for independence. The wounded soldier was brought into these institutions which often served as barracks as well. The early days of the republics found many poor. During the troublous times the gentry left the farms of plenty and took refuge and protection in the city. The men died in battle and the countryside was deserted. The capacity of the hospital was strained and the few Sisters could not care for the innumerable patients. The poor came in to help and they were the first class of lay nurses – menial laborers, nothing more. They were poor and untrained, and as the successors of these people came they were poor also and so uneducated. Thus nursing has not risen to a profession of highly trained and educated women as we know it to be.

The period of transition is at hand, for, mark you, the science of medicine and surgery has advanced and hospitals cannot be conducted without trained help. Not only is this true, but the home is no longer considered a desirable place for the sick. Our Latin-American friends realize this and three important advances have been made: first, as hospitalization

is necessary, the better classes must be provided for, and as a consequence we find private hospitals springing up, and the nurses are trained by the doctors in charge in much the same way that a stenographer in a doctor's office is trained to be an office nurse; second, to provide better trained help for the public hospitals, training schools have been started, and to be sure the first students are from the humble classes with only meager primary schooling; lastly, and most important to my mind, the middle classes, who cannot afford the private hospital and who do not wish to be considered paupers and be admitted to a public ward, must be provided for, so *Pensionadas*, or pay departments, have been established in the public hospitals. They are termed, according to their ability to pay, as first, second, and third class, and are given private, semi-private, or small ward services.

This, I think, shows a trend in the right direction. The public will soon be fully cognizant of the advantages and protection of the hospital and demand good nursing. This in turn will raise nursing to the dignity of a profession with a consequent demand for educated women of the better families, and it will encourage women in general to enter the professions and participate in public affairs. Even today the upper classes are taking an interest in nursing. Since the Great War the work of the Red Cross nurse has created in the minds of the people a new and favorable impression of the trained nurse. Local chapters of the Red Cross have been established in the various Latin-American countries, and now we find the wives and daughters of prominent families studying nursing in the day schools of the Red Cross, that they may go out and assist in public health and welfare work.

Many of these women have taken an active interest in Child Welfare and assist daily in the nurseries or milk stations where infant feeding and hygiene are taught to poor mothers. In Santiago, Chile, there are eleven of these stations, called *Gotas de Leche* (Drops of Milk), and they are doing a very laudable work.

All, I think, in time will lead to the desired result, viz., a standardization of all hospitals such as we have today in the United States and Canada.

We saw many of the best surgeons operate in well-appointed clinics under ideal surgical asepsis, and with classical technique. The work was of the highest type, and we learned many things of interest. We have returned, enriched in wisdom in many ways; and we have discovered clinics that we can visit repeatedly with profit.

PART IV

SUMMARY OF FACTS

Historical, Geographical, Political, Social and Industrial

SUMMARY OF FACTS

Historical, Geographical, Political, Social and Industrial

ARGENTINA

1. Historical Review: On February 2, 1535, Don Pedro de Mendoza, a Spaniard, founded on the right bank of the Rio de La Plata the town of Buenos Aires. He was appointed Governor of the territories. However, it was not until 1580 that the town was permanently established. At about this time other towns in Argentina were founded, among them San Juan, Mendoza, and San Luis. Buenos Aires remained under Spanish domain until 1806, when it was occupied by the English. But within a month the Spanish regained possession of the territory which it retained until Argentina seceded from Spain and named its directorate on May 25, 1810. In 1820 the directorate was dissolved, and each province governed itself according to its own tastes. A few months afterward a new Congress, held at Buenos Aires, chose a new President of the Confederated Republic of all provinces. The revolutionary war actually lasted until 1822, when, through the victories of General San Martín in Chile and Peru, where Spanish forces were still fighting after being defeated in Argentina, the colonists firmly established their independence. The United States was the first nation to recognize this independence, and when it was threatened by the "Holy" alliance, President Monroe propounded his famous doctrine in defense of the young Republic. Argentina originally included Bolivia, Paraguay, and Uruguay.
2. Area: 1,153,418 square miles. 8 inhabitants to the square mile. Second largest of South American republics. As great as United States east of the Mississippi.
3. Physical Contour: 2,227 miles long; 911 miles at widest point; 202 miles at narrowest point. Bounded on north by Bolivia and Paraguay, on east by Brazil, Uruguay, and Atlantic Ocean, and on south and west by Chile. Western boundary mountainous; eastern land, pampas. Lies in latitude 22° to 56° S.; longitude 54° to 73° W.
4. Principal Bodies of Water: Five river systems with about 25 tributaries, the principal rivers being the Rio Plata, Paraná, and the Paraguay. Principal lakes: Nahuel-Huapi, Buenos Aires, San Martín, Viedma, Argentino.

5. Railways: About 23,000 miles of railway open to traffic. Only a small portion state-owned. 500 passenger trains leave Buenos Aires daily. Ninth country in the world in railway development.
6. Method of Travel: Railroad and river navigation.
7. Climate: Average summer temperature about 77° F., winter 40° F. Warmest month, January; coldest month, July. Climate varies in different parts of the country, as it extends from the Torrid, through the Temperate, and into the Frigid Zone.
8. Form of Government: Similar to United States, with few minor exceptions.
   President and Vice President: Hold office for six years and are not eligible for re-election to these posts for the term immediately succeeding.
   Senators: Thirty, two for each province, and two for the Federal Capital. Serve nine years, one-third retiring each three years.
   Chamber of Deputies: One hundred and twenty members, one for each 33,000 inhabitants. Serve for four years, one-half retiring each two years.
   Cabinet: Ministers of Interior, Foreign Affairs and Worship, Treasury, Justice and Public Instruction, War, Navy, Agriculture, and Public Works.
9. President and Vice-President: President, Señor Dr. Marcelo T. de Alvear; Vice-President, Señor Dr. Elpidio Gonzalez. Terms expire October 12, 1928.
10. Provinces and Territories:
   Provinces: Buenos Aires, Catamarca, Córdoba, Corrientes, Entre Rios, Jujuy, La Rioja, Mendoza, Salta, San Juan, San Luis, Santa Fe, Santiago del Estero, Tucumán.
   Territories: Chaco, Chubut, Formosa, La Pampa, Los Andes, Misiones, Neuquen, Rio Negro, Santa Cruz, Tierra del Fuego.
   Federal District: Buenos Aires.
11. Principal Cities: Buenos Aires (Capital), 1,811,745; Rosario, 265,000; Córdoba, 160,000; LaPlata, 150,000; Tucumán, 100,000; Bahia Blanca, 80,000; Mendoza, 65,000.
12. Principal Ports: Buenos Aires, Rosario, LaPlata, Bahia Blanca, Port Madryn.
13. Population: 9,548,092. 2,000,000 less than population of state of New York. One-fifth of total population reside in Buenos Aires, which is practically as large as Philadelphia. Next to Paris, Buenos Aires is largest Latin city in the world.
14. Inhabitants: Argentines, Italians, Spanish, French, Austro-Hungarians, English, German, Swiss, Belgians importance in order named.
15. Industries and Manufacture: Pastoral and agricultural industries, mainly. Cultivation of sugar cane and manufacture of wines secondary.

16. Imports and Exports: In 1924 United States supplied 23.0 per cent. of total imports and took 7.1 per cent. of the exports.
17. Education: Primary, secondary, normal, special, and higher. Primary education compulsory for all children from 6 to 14 years of any nationality whatever. Schools are secular, but ministers may teach religion out of class to the children whose parents wish it. Public school education gratuitous. Primary schools, 6 years; secondary schools, 5 years; normal, 2 and 4 years; superior normal, 7 years; medical course, 7 years.
18. Religion: All religions tolerated. No state religion, although Catholic religion is supported by state and predominates.
19. Language: Spanish is the universal language. French and English follow in importance.
20. Hotels:
Buenos Aires: Plaza, Colon, Grand, Metropole, Phoenix, Savoy, Majestic, Palace, Royal.
Rosario: Italia, Savoy.
La Plata: Argentino, Mosquera.
Tucumán: Savoy, Artiga Frascata, Lyon, Paris, Central.
Córdoba: Plaza.
21. Commercial Establishments: Buenos Aires: Harrods, Gath and Chaves, A la Ciudad de Londres, Al Progreso, A la Ciudad de Mejico, A la Tienda San Juan, Avelino Cabezes, Co-operativo Nacional de Consumos, English Book Exchange, Bon Marche, Louvre.
22. Hospitals:
Buenos Aires: Modelo Instituto Clinica, Military, Hospital de Clinicas, Piñero, Rawson, British, Argentino Zarate, Italian, Rivadavia, Institute of Surgery, Sala IV for Surgery of Children and Adults, Ramos Mejia, Alvarez, Alvear, San Luis Gonzaga, Children's, Durand, Fernandez Pirovano, Salaberry, Muniz, Tornú, Nueva Pompeya, Villa Devoto, Velez Sarafield, Las Heras, Boech, Cosme Argerich.
Córdoba: St. Roque's, Clinical.
Rosario: Español, Centeñario, Britanico, Caridad, Rosario, Italian.
23. Medical Schools: National Universities at Buenos Aires, LaPlata, Córdoba, and Rosario.
24. Principal Points of Interest: Buenos Aires:
Streets, Drives, and Public Parks: Plaza Congreso, Plaza de Mayo, Avenida de Mayo, Calle Callao, Avenida Florida, Plaza San Martin, Calle Corrientes, Plaza Lavalle, Plaza Italia, Plaza Rodriguez, Peña, Palermo Park, Mar del Plata (bathing beach).
Buildings: Capitol, President's Palace, Palace of Justice, Art Museum, Colon Theater, Cathedral (contains tomb of San Martin), Jockey Club, National Library, National Historical Museum, La Prensa (home of newspaper of that name), Gabria Guemas (office building), Reservoir.

Other Places of Interest: Botanical and Zoölogical Gardens, Central Market, Port of Buenos Aires, Recoleta Cemetery, Hippodrome, El Tigre (checker-board formed by natural channels), La Plata (Zoölogical Gardens, National University, Astronomical Observatory, Museum), American Club, and numerous clubs with facilities for sports of all descriptions. Many beautiful monuments appear in all plazas and parks.

25. Street and Motor Cars: To all parts of the larger cities, and to the suburbs.
26. Coins: Monetary unit—Gold peso, normal value $0.9648 United States. Paper peso is the medium for commercial transactions, with a normal value of $0.424 United States.
27. Weights and Measures: Metric system.
28. Postage: 5 centavos ¾ ounce, 5 centavos each additional unit or fraction thereof. From United States to Argentina: 2 cents per ounce.
29. Mail Time: 18 days from New York to Buenos Aires.
30. Cable Rates: From New York: 50 cents a word, full rate; 25 cents, deferred rate; 12½ cents, week-end letter.
31. Wireless: Ano Nuevo, Cabo Virgenes, Campo Mayo, Darsena Norte, Darsena Sud, Faro Mogotes, Faro Recalada, Formosa, La Paz, Mendoza, Ministerio de Guerra, Puerto Militar, Rio Santiago, Ushuaia, Posades, Iguazu, Rio Grande, Zarate, Punta Delgada, Comodoro Rivadavia, and Gulf of St. George.
32. Difference in Time: 1 hour 2.4 minutes east of New York.
33. Holidays: January 1, New Year's Day; May 25, Independence Day; July 9, Proclamation of National Independence; October 12, Discovery of America; November 11, San Martin's Day (Buenos Aires only); December 25, Christmas Day. Many other Church holidays.
34. Flag: Three horizontal stripes, light blue, white, and light blue. Sun with rays in center of white stripe.
35. Publications: About 520 publications regularly issued, 100 in foreign languages; range from few thousand to over 100,000 circulation. Practically all published in Buenos Aires.
36. Diplomatic Service: Exchange Ambassador.
37. Banks (American and British branches):

Buenos Aires: National City Bank of New York; First National Bank of Boston; Mercantile Bank of the Americas; American-Foreign Banking Corporation; Anglo-South American Bank, Ltd.; Royal Bank of Canada; London and River Plate Bank, Ltd.

Bahia Blanca: Anglo-South American Bank, Ltd.; London and River Plate Bank, Ltd.

Córdoba: London-River Plate Bank.

Rosario: National City Bank of New York; Anglo-South American Bank, Ltd., London and Brazilian Bank, Ltd.

Tucumán: London and River Plate Bank.

BOLIVIA

1. Historical Review: Prior to the revolt to Spanish rule known as the Province of Charcas (upper Peru). Named for Simon Bolivar, the great Liberator. Commencement of the war for liberation signalized by the Battle of Titicaca in 1811. Four years of warfare freed the country from Spain (see also Argentina). First general assembly of Deputies held in 1825, and the constitution adopted in 1826.
2. Area: 514,595 square miles. 5.4 inhabitants per square mile. Most sparsely settled of South American republics. Twice the size of Texas. Fourth largest of South American countries.
3. Physical Contour: Inland republic, reached from Mollendo, Peru, and Arica and Antofagasta, Chile. Bounded by Brazil, Peru, Chile, Argentina, and Paraguay. Two great chains of the Andes divide Bolivia into many valleys and basins. Bolivian table land, at an altitude of 12,000 feet, comprises about 40,000 square miles lying between the two ranges. This country contains three of the highest peaks of the western hemisphere, Illampu, Illimani, and Sorati. Latitude 10° to 22° S.; longitude 57° to 70° W.
4. Principal Bodies of Water: Lake Titicaca, 4,000 square miles. Rivers: Paraguay, 1,050 miles; Itenes, 1,000 miles; Beni, 1,000 miles, and many others.
5. Railways: 1,100 miles of railroad in Bolivia, 230 miles under construction.
6. Method of Travel: 12,000 miles of navigable river, and railways.
7. Climate: Almost entirely within Torrid Zone, but climate not tropical owing to great altitude. Majority of population lives at an altitude of from 8,000 to 16,000 feet above sea level. The mean temperature ranges from 74° to 50° F.
8. Form of Government: Republic.
   President and two Vice-Presidents elected by popular vote for a term of four years, and may not be re-elected for the term immediately succeeding.
   Senators: Sixteen, elected by people for six years, renewed by thirds every two years.
   Chamber of Deputies: Seventy-two, elected by people for four years, one-half retired every two years.
   Cabinet: Ministers of Foreign Relations and Worship; Interior and Justice; Treasury; Promotion; Public Instruction and Agriculture; War and Colonization.
9. President: Señor Hernando Siles. Term expires 1929.
10. Departments and Territories:
    Departments: Chuquisaca, Cochabamba, El Beni, La Paz, Oruro, Potosi, Santa Cruz, Tarija.
    Territories: Colonias del Noroeste and del Gran Chaco.
    National Delegation in the Orient.
11. Principal Cities: La Paz, 118,250; Oruro, 32,908; Cochabamba, 34,281; Potosi, 30,122; Sucre (Capital), 29,500.

12. Principal Ports: No sea port.
13. Population: 2,990,220 (estimated).
14. Inhabitants: In 1900: 920,864 Indians; 486,018 mixed; 231,088 whites; 3,945 negroes; balance unclassified.
15. Industries and Manufacture:
    Mining: Tin, wolfram, copper, tungsten, silver, and bismuth (world's most important source of supply).
    Agriculture: Rubber, wheat, corn, fruits, cacao, coffee.
    Cattle Raising: Southeastern portion of country destined to become important cattle raising country. 5,000,000 acres uncultivated.
16. Imports and Exports: In 1924 United States supplied 28.5 per cent. of imports and took 22 per cent. of exports.
17. Education: Free and compulsory; state aided. About 600 primary schools with a six year course, and 57,000 pupils; secondary schools with six year course, and about 3,400 students; normal schools, and several universities.
18. Religion: State recognizes only Roman Catholic church. Other religions tolerated.
19. Language: Spanish.
20. Hotels:
    La Paz: Paris, Guilbert, Whitehouse, Hartlieb, Park, Sportsman, Gran, Renania, Pullman.
    Sucre: Hispaño, Americano, España, Colon, Uguin, Japones, Burgos.
    Cochabamba: Majestic, Union, Sucre, Americano, Gran, Continental, Comercio, Central.
21. Commercial Establishments: There are many good shops, including Casa Grande and El Condor at La Paz.
22. Hospitals:
    Cochabamba: Viedma.
    La Paz: General, Miraflores.
23. Medical Schools: La Paz and Sucre.
24. Principal Points of Interest:
    La Paz: The Alameda, Calle Comercio, Capitol Building, Government and Justice Building, Ayacucho Street, Plaza Murillo, Cathedral, Churches, Museum, Library, Bull Ring, and Market.
    Sucre: Governor's Palace.
    Lake Titicaca: Highest fresh water lake in the world. Boats (called balsas and callapos) used by Indians on lake are very interesting.
    Volcanoes: Illimani and Sorati among highest in world.
    Inca Ruins: Short distance from La Paz, world famous.
    Lake Pospo. Prehistoric ruins near Cuzco. Ruins of Vilanota and Choquequiras. Bolivian mines, most famous Potosi.
25. Street and Motor Cars: Street cars and taxicabs.
26. Coins: Gold standard. Boliviano, equals $0.39 United States. Paper notes in denomination of 1, 5, 10, 20, 50, and 100 bolivianos.

27. Weights and Measures: Metric system.
28. Postage: From Bolivia to United States: 15 centavos per ounce; 10 centavos each additional unit or fraction. From United States to Bolivia: 2 cents per ounce.
29. Mail Time: 18 days from New York to La Paz.
30. Cable Rates: From New York: 50 cents a word, full rate; 25 cents, deferred rate; 12½ cents, week-end letter.
31. Wireless: Riberalta, Cobija, Yacuiba, Ballivian, D'Orbigny, Esteros, Villa-Bella, La Paz, Santa Cruz, Puerto Suarez, Guayarameim, Cachnela Esperanza, Viacha, Trinidad.
32. Difference in Time. La Paz, 25 minutes east of New York.
33. Holidays: January 1, New Year's Day; February 3, Birthday of General Sucre; June 24, National Feast; July 15, 16, and 17, La Paz Municipal; July 24, Birthday of Simon Bolivar; August 5, 6, and 7, National Independence; October 12, Discovery of America; December 25, Christmas and many Church holidays.
34. Flag: Three horizontal stripes—red, yellow, and green.
35. Publications: Principal daily papers are published at La Paz and Sucre; others at Cochabamba, Oruro, Potosi, Santa Cruz, and Tarija.
36. Diplomatic Service: Exchange Minister.
37. Banks:
La Paz and Sucre: Banco Mercantile.

BRAZIL

1. Historical Review: A Portuguese navigator, who landed not far from Bahia, is usually given credit for having discovered Brazil in 1500, although several other Portuguese navigators had touched the Brazilian coast some years before. No attempt was made to settle the country until 1549, when Thomé de Souza was appointed Governor General, and named the country "Brazil," a red dyewood found in the forests.

The Portuguese crown divided the country, making grants to Portuguese nobles who were to settle and colonize and receive a number of Indian slaves in addition to the land. To prevent the Indians from being enslaved, the Jesuits who came with Thomé de Souza recommended the importation of African slaves, thousands of whom were imported from Africa during the sixteenth and seventeenth centuries.

Between 1555 and 1640 the country suffered numerous invasions from the French, Dutch, and British. In 1631, the Dutch took possession of Pernambuco and gradually extended their power over a considerable portion of Brazil. In 1640 Brazil became a vice-royalty, with Rio de Janeiro as the capital, and in 1648 the Dutch were forced to abandon the country.

In 1808, when Napoleon invaded Spain and Portugal, King John of the latter country retired to his American kingdom. He established schools, and in general promoted the interests of his colony. When he returned to Portugal in 1821, he appointed his eldest son, Dom Pedro, regent of Brazil. Dom Pedro encouraged and fostered the movement for independence from Portugal, and in September, 1822, he formally proclaimed Brazil to be free and independent. In 1830 he was solemnly crowned emperor of Brazil. He reigned until 1831, and his son until 1889, when the people of Brazil resolved to change their form of government from a monarchy to a republic. This was accomplished without bloodshed; the emperor abdicated his throne and the Republic of Brazil was proclaimed.

2. AREA: Largest South American country. Fourth largest in the world. 3,286,173 square miles. 9.3 inhabitants to the square mile. Greater than the United States, excluding Alaska; 16 times as large as France.

3. PHYSICAL CONTOUR: Elevated plateau, broken up by numerous navigable rivers, the country being divided by two main water heads, the Amazon river in the north, and the Paraná and Paraguay rivers in the south.

   Four main series of mountain ranges: Andes, northwest corner; Central, between Amazon and River Plate; Northern, borders of Venezuela and Guianas; Coastal, extending from Bahia to Uruguay, close to the Atlantic.

   Shore line of 5,000 miles on Atlantic Ocean.

   Latitude 4°22′ N. to 33°45′ S.; longitude 34°40′ to 73°15′ W.

   Bounded by all countries in South America except Chile.

4. PRINCIPAL BODIES OF WATER: Rivers: Amazon (¾ length of Mississippi and Missouri rivers combined; one island in the river as large as Massachusetts; navigable almost in its entirety), Negro, Purús, Madeira, Pardo, Tapajcz, Pará, Juruá, Javary. Fifty-five of the largest rivers of the world in Brazil, 33 wholly or largely within the country. Lakes: Patos and Merim.

5. RAILWAYS: 18,600 miles of railroad open to traffic, operated by the government, the state, private companies under federal control, and private companies exclusively.

6. METHOD of TRAVEL: By railroad and 30,000 miles of navigable river. While bordering on all countries excepting Chile, direct railroad connection only with Uruguay.

7. CLIMATE: Climate comparatively good for a tropical country; seasons opposite to our own. In Amazon Valley, owing to insect-borne diseases, climate is unhealthy.

8. FORM OF GOVERNMENT: While similar to United States, the Brazilian Federal Government does not have as extensive power. Federal Union of 21 states, each with its own autonomous government and organization.

President: At head of Federal Union, elected by direct vote on March 1 for four years. Takes office November 15. Ineligible for re-election.

Vice-President: Elected in same manner under the same qualifications. Ex-officio President of the Senate. In event of vacancy of the presidency during the first half of his office, the Vice-President succeeds him; but if during second half, new election is held.

Senate: Consists of 63 members, three from each state and three from the federal capital; elected by direct male vote for nine years, one-third retiring every three years.

Chamber of Deputies: One for every 70,000 inhabitants, each state having at least four Deputies. Elected for three years.

Cabinet: 7 members: Ministers of Justice and Interior; Foreign Relations; Marine; War; Communications and Public Works; Finance; Agriculture, Industry and Commerce. Chosen by President, and may not be members of the Senate.

9. PRESIDENT AND VICE-PRESIDENT: President, Senhor Washington Luiz; Vice-President, Dr. Mello Viana. Terms expire 1930.
10. STATES: Alagoas, Amazonas, Bahia, Ceara, Espirito Santo, Goyaz, Maranhão, Matto Grosso, Minas Geraes, Pará, Parahyba, Paraná, Pernambuco, Piauhy, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catharina, São Paulo, Sergipe, Acre (Territory), Rio de Janeiro City (Federal District).
11. PRINCIPAL CITIES: Rio de Janeiro (Capital), 1,157,873; São Paulo, 579,033; Bahia (São Salvador), 283,422; Recife (Pernambuco), 238,843; Pará (Belém), 236,402; Porte Alegre, 179,263; Rio Grande do Sul, 70,000.
12. PRINCIPAL PORTS: Rio de Janeiro, Santos, Bahia, Pará and Pernambuco.
13. POPULATION: 30,635,605. 15,443,818 males; 15,191,787 females.
14. INHABITANTS: Portuguese predominate; Italian, Spanish, German, 500,000 Indians in Amazon area, and negroes.
15. INDUSTRIES AND MANUFACTURE:

Agriculture: Coffee (75 per cent. of world's total production from Brazil; 80 per cent. of crop from São Paulo; United States takes about 75 per cent. of Brazil's coffee); sugar, rubber, maté, cotton, tobacco, cacao, skins, timber, rice.

Minerals: Manganese, gold, diamonds, iron and steel.

Cattle Raising: Increasing in importance.

Manufacture: Weaving and textiles, shoemaking, and other necessaries of domestic life.

16. IMPORTS AND EXPORTS: In 1924 United States supplied 24 per cent. of imports, and took 42.8 per cent. of exports.
17. EDUCATION: Central government has been prevented by constitutional restrictions from making education compulsory in the states; but some of the latter have taken this step, and

wherever the government can offer it at all and make it free, education is free. Distributed unevenly throughout the states are more than 21,789 primary schools with 1,250,729 pupils, 40 recognized secondary schools, and normal schools. There is no national university.

18. Religion: Absolute equality among all forms of religion, but all excepting about 100,000 are Roman Catholics.
19. Language: Portuguese.
20. Hotels:
    Rio de Janeiro: Copacabana, Gloria, Palace, Bellevue, Central, Estrangeros, Internacional, Metropole.
    Bahia: Grand, Sul Americano.
    Pernambuco: Recife, Americano, Commercial, Bunn, Parque.
    São Paulo: Esplanada, Excelsior, Terminus.
    Santos: Parque Balneario, Guarujá, Palace, Grande Plague.
21. Commercial Establishments: Innumerable interesting shops in Rua Ouvidor, Avenida Niemeyer, and other streets which cross the former in Rio de Janeiro; also many shops in São Paulo, and the other principal cities.
22. Hospitals:
    Bahia: Santa Isabel, Portuguese.
    Bello Horizonte: Santa Casa da Misericordia.
    Nictheroy: São João Baptista.
    Pelotas: Santa Casa.
    Rio de Janeiro: Nossa Senhora da Saude, San Francisco da Assis, Santa Casa da Misericordia, Maternidade, Pro-Matre, Ernesto, Gamboa, Strangers, Sanatorio Guanabara, Faculty of Medicine, São Sebastião.
    Rio Grande do Sul: Santa Casa do Rio Grande.
    Santos: Santa Casa da Misericordia.
    São Paulo: Maternidade, Central, Santa Casa da Misericordia, Santa Casa da São Paulo, Samaritan, Municipal, Santa Catharina, Policlinica, Instituto Paulista, José de Mendonça, Strangers, Casa da Saude Matarazzo.
23. Medical Schools: Faculties of Medicine at Rio de Janeiro, São Paulo, Curitiba, Bahia, Porte Alegre, Bello Horizonte, Manáos.
24. Principal Points of Interest: Rio de Janeiro:
    Mountains: Sugar Loaf, Corcovado, Tijuca, Vista Chineza, Quinta da Boa Vista, Meza da Imperador, Gavea.
    Drives: Santa Thereza (the aqueduct), São Silvestre, Sumaré.
    Streets: Rua Payssandú (palm street), Mangue Canal (with quadruple palm avenue), Rua Beira Mar, Avenida Rio Branco, Rua Ouvidor (shopping), also Avenida Niemeyer.
    Buildings: Cathedral, Mint, Municipal Theater, Monroe Palace, Academy of Fine Arts, National Library, Congressional Building, Castle São Sebastiao, Oswaldo Cruz Institute, National Museum (formerly Emperor's Palace), President's Palace.

Parks and Gardens: Botanical Gardens, Zoölogical Gardens, Praça Republica Gardens, Public Parks; many plazas containing beautiful statues.

Trips: On ferry to Nictheroy and small islands in the bay. Petropolis, where are located most of the summer residences of diplomatic representatives in Brazil, also President's summer palace.

Beaches: Botafogo, Copacabana, Ipanema, Leme, Leblon, Vermelhe, Formosa, Santa Luzia, Lapa, Gloria, Flamingo, Avenida Atlantica.

Clubs: English Country, Jockey, Navy, Fluminense, and many others.

São Paulo: Governor's Palace, Municipal Theater, Upiranga Museum of Art, beautiful clubs and public buildings, Snake Farm (Butantan), coffee plantation (Campiñas), Mackenzie College (organized by a Canadian), Viaducto do Chá, Exchange, Library, Cathedral, Churches. Hotel of Immigrants. *Streets:* Rua São Prente, Quinze de Novembro, Direita, Parque Jaraguara, Villa Marianna, Jardim America, Jardim d' Aclimataçao, Jardim da Luz, Ponta Grande, St. Anne, Cantareira, Reservoir, Freguesia d'o, Largo do Thesouro, Largo do Palacio, Tiradentes Plaza, Rangel Pestena, Avenida Paulista.

Santos: Drive along the beach, São Vincente, José Minino, Bogueirao, Praia Grande, Guarujá (summer resort).

25. Street and Motor Cars: To all parts of cities and suburbs.
26. Coins: Gold standard. Unit, gold milreis equals $0.5463 United States; paper milreis, used in commercial transactions, equals $0.3292 United States.
27. Weights and Measures: Metric system.
28. Postage: 200 reis, ½ ounce; 100 reis each additional unit. To Brazil from United States: 2 cents per ounce.
29. Mail Time: 12 days from New York to Rio de Janeiro.
30. Cable Rates: From New York to Rio de Janeiro, 50 cents a word, full rate; 25 cents, deferred rate; 12½ cents, week-end letter.
31. Wireless: Stations at. Abrolhos, Amaralina, Anhatomirim, Babylonia, Cruzeiro do Sul, Fernando de Noronha, Ilha das Cobras, Ilha do Governador (Rio de Janeiro), Ilha Raza, Junccao, Ladario, Lagoa, Manaos, Monte Serrat, Olinda, Pará, Porto Velho, Rio Branco, Santarem, São Thome, Senna Madureura, Tarauaca. 15 new stations have been added along the Amazon and Paraguay rivers, and five on the coast.
32. Difference in Time: Rio de Janeiro, 2 hours 7 minutes east of New York.
33. Holidays: January 1, New Year's Day; February 24, Promulgation of Constitution; April 21, Tiradentes Day; May 3, Discovery of Brazil; May 13, Abolition of Slavery; July 14, Liberty Day; September 7, Independence Day; October 12, Discovery of America; November 2, Memorial Day; November

15, Proclamation of the Republic; December 25, Christmas Day. Besides the usual church holidays, there are local holidays in each state.

34. Flag: Green back-ground with large yellow diamond; small blue center in diamond containing twenty-two small stars and the words "Order and Progress."

35. Publications: Numerous publications, regularly issued. *Brazilian-American* (weekly publication) particularly interesting to Americans.

36. Diplomatic Service: Exchange Ambassador.

37. Banks (American and British branches):

Bahia: National City Bank of New York.

Pará: Mercantile Bank of the Americas; London and Brazilian Bank, Ltd.

Pernambuco: Mercantile Bank of the Americas; National City Bank of New York.

Porte Alegre: Anglo-South American Bank; National City Bank of New York; London and Brazilian Bank, Ltd.

Rio de Janeiro: National City Bank of New York; American-Foreign Banking Corporation; Royal Bank of Canada; London and Brazilian Bank, Ltd.

Rio Grande do Sul: Anglo-South American Bank; London and Brazilian Bank, Ltd.

Santos: National City Bank of New York; Royal Bank of Canada.

São Paulo: National City Bank of New York; London and Brazilian Bank, Ltd.; Royal Bank of Canada.

CHILE

1. Historical Review: The dominion of the Incas of Peru included the northern and central portions of Chile. In 1535 the Spanish congress of the Inca Empire sent its first expedition southward along the Pacific Coast. But the task of adding this territory to the Spanish possessions in Peru and upper Peru (Bolivia) was not undertaken in earnest until 1541, nor was it brought to a successful conclusion without desperate fighting in the second half of the 16th century. Pedro de Valdivia suffered defeat and death in 1553 at the hands of the Union Indian leader. The Araucanians offered a stubborn resistance, and even as late as the 18th century they retained a large part of the country.

In September, 1810, the first national government was formed to rule the country during the captivity of the King of Spain by the French. From that time forward the desire to achieve independence was never relinquished, though the years immediately following were of a character to discourage patriotic aspirations. The Chileans were defeated and com-

pelled to return to nominal subjection, but the final success was won with the help of the Argentine troops under General San Martín, and the independence of the country was proclaimed in 1818. A constitution was adopted in 1824, and finally shaped in 1833 substantially to its present form. Independence was recognized by a formal arrangement with Spain and embodied in the treaty of 1844.

In 1865, however, war broke out between the mother country and Chile and Peru, hostilities continuing until 1869. After an interval of peace, the war on the Pacific began. In 1879, Chile declared war on both Bolivia and Peru. The Bolivian frontier was settled by a treaty of October, 1904, but the plebiscite between Peru and Chile, which was to have been held in 1893, did not take place. The President of the United States, in 1925, acted as arbitrator, and arrangements are now (1926) under way to hold the plebiscite.

2. Area: 289,828 square miles. 13 inhabitants to the square mile. Larger than New England states, with the addition of New York, New Jersey, Pennsylvania, Maryland, and Virginia. Seventh largest South American country.

3. Physical Contour: Narrow strip of land between the Andes and the Pacific Ocean, running in the general direction of north and south for a distance of almost 3,000 miles. Width of the country varies from 100 to 250 miles. Divided into three regions: Mineral in north; agricultural and coal in center; timber and cattle in south. Latitude 17°57′ to 56° S.; longitude 66° 30′ to 75° 40′ W. Bounded on east by Argentina and Bolivia, on north by Peru, on south and west by Pacific Ocean. Northern portion of Chile arid; southern portion covered with vegetation, interspersed with a chain of small lakes. Aconcagua, highest point on western hemisphere, in Chilean Andes (22,422 feet high, an extinct volcano).

4. Principal Bodies of Water: Rivers: Maullin, Bueno, Loa, Maipo, Itata, Pudeto, Palena, Calle-Calle, Cautin, Bio-Bio, Maulle; all navigable for short distances and for small vessels. Many small lakes in southern portion of country.

5. Railways: Total length about 6,000 miles, extending from north to south, and from east to west at Santiago, Valparaiso, Arica, and Antofagasta. All railroads owned by government with exception of few in the nitrate region. Six different gauges used range from 2 feet 6 inches to 5 feet 6 inches.

6. Method of Travel: Railroad exclusively in interior; Pacific Ocean on west coast.

7. Climate: Varies in different parts of country, extending from Torrid, through Temperate, and into Frigid Zone. Two seasons, summer from September to April, and winter from May to August. Hottest months January and February. In northern part, climate hot throughout the year and little rain. In extreme south, rain and cold predominate. Valparaiso comparable with San Francisco; Santiago with Charleston, S. C.

8. Form of Government: Similar to United States, with slight variations.
   President: Executive officer, elected by direct vote for five years, ineligible for re-election for immediately succeeding term. In event of presidency being vacated, Minister of Interior assumes office.
   Council of State: President of the Republic, 5 members appointed by him and 6 appointed by Congress.
   Senate: Consists of 37 members, 1 for every 3 deputies; hold office for six years; one-half retire every three years.
   Chamber of Deputies: 118 members, one for every 30,000 inhabitants; hold office for three years by direct vote.
   Cabinet Members: Ministers of Interior; Foreign Relations; Worship and Colonization; Justice and Public Instruction; Finance; War and Marine; and Industry, Railways and Public Works.
   Voters: All male citizens over twenty-one years of age. Must be able to read and write. Soldiers and sailors and policemen not qualified to vote.
9. President: Señor Emiliano Figueroa. Term expires 1931.
10. Provinces: Aconcagua, Antofagasta, Arauco, Atacama, Bio Bio, Cautin, Chiloé, Colchagua, Concepción, Coquimbo, Curicó, Linares, Llanquihue, Malleco, Maulé, Nuble, O'Higgins, Santiago, Tacna, Talca, Tarapacá, Valdivia, Valparaiso, Magallanes (territory).
11. Principal Cities: Santiago (Capital), 507,296; Valparaiso, 182,422; Concepción, 64,074; Antofagasta, 51,531; Iquique, 37,421; Talca, 36,079; Punta Arenas, 20,437.
12. Principal Ports: There are more than 60 ports, one-fourth of them being regular ports of entry. Principal among these are: Valparaiso, Antofagasta, Iquique, Arica, Talcahuana, Punta Arenas.
13. Population: 3,754,723 inhabitants. 1,866,751 males; 1,887,972 females.
14. Inhabitants: Great majority of population of European origin.
15. Industries and Manufacture:
   Mining: Nitrate of soda (world's principal producer; contributes through duties levied 80 per cent. of entire revenue of Chile); copper, iron, salt, silver, coal (insufficient for needs of country).
   Agriculture: Fruits, grain, sheep, timber; in central portion all products of the Temperate Zone and of the sub-tropics.
   Manufacturing: Insufficient for needs of country. Also make wines.
16. Imports and Exports: United States, in 1924, supplied 23.5 per cent. of imports and took 41 per cent. of exports.
17. Education: Education in primary schools gratuitous and compulsory. Approximately 3,770 primary schools, with 425,100 pupils enrolled. Course, 6 years. Secondary course, 6 years. 15 normal schools. Medical course, 7 years.

18. Religion: Roman Catholic religion maintained by state; but all religions are respected and protected.
19. Language: Spanish.
20. Hotels:
Antofagasta: Grand, Londres.
Valparaiso: Royal, Palace, Astur.
Santiago: Savoy, Plaza, Grand, Español, Oddo.
Viña del Mar: Gran.
Los Andes: Sudamericano.
21. Commercial Establishments: Many interesting shops in all of the principal cities of Chile.
22. Hospitals: All hospitals under the jurisdiction of Junta de Beneficencia, no pay hospitals.
Santiago: San Vincente de Paul, San Borja, El Salvador, Maciel.
Valparaiso: Carlos Van Buren, St. Augustin, San Vincente, San Juan de Dios, Children's, German, El Salvador, Valparaiso.
23. Medical Schools: University of Chile, Santiago; Catholic University, Santiago; School of Medicine, Concepción.
24. Principal Points of Interest: Santiago.
Streets and Parks: The Alameda (Chile's Hall of Fame), Plaza des Armes, Parque Cousiño, Avenida de las Delicias, Parque Forestal, Quinta Normal, Plaza Blanca Encalada, Cerro Santa Lucia, Cerro de San Cristobal.
Buildings: National Capitol, Cathedral, Palace of Justice, Intendencia, University of Chile, Catholic University, National Library, Artillery Quarters, Arsenal, Military Academy, President's Palace, Palacio de Bellas Artes, Municipal Theater, National Museum, Jockey Club, Triumphal Arc.
Restaurants: Café Rio de Janeiro, Café Olympia, Santiago, Savoy, Mundial, Bahia.
Valparaiso: *Streets and Parks:* Avenidas Brazil, Juncal, Chacabuco, Maipu, Victoria, Independencia, Colon, Gran, Esmeralda, Cochrane, Prat. Playa, Ancha, Plaza Victoria, Chilean Naval Academy, English and Spanish cemeteries.
Beaches: Miramar, Seaside Park, Montemar.
Viña del Mar (Summer Resort): Race course, bathing beach, casinos, tennis courts, golf course, auto ride to Concon.
25. Street and Motor Cars: Double-decked cars in Santiago and Valparaiso, upper story for second-class passengers. Horse cars in Iquique. Street cars and motor cabs in all principal cities.
26. Coins: Gold standard. Gold peso equals $0.365 United States; paper peso equals $0.20 United States.
27. Weights and Measures: Metric system.
28. Postage: Forty centavos ¾ ounce, 10 centavos each additional unit or fraction. United States to Chile: 2 cents per ounce.

29. Mail Time: 18 days from New York to Antofagasta.
30. Cable Rates: From New York: 50 cents a word, full rate; 25 cents a word, deferred rate; 12½ cents, week-end letter.
31. Wireless: Arica, Antofagasta, Coquimbo, Punta Arenas, Talcahuana, Valdivia, Puerto Montt, and Valparaiso.
32. Difference in Time: Valparaiso, 9.3 minutes east of New York.
33. Holidays: Day of each Presidential election; January 1, New Year's Day; May 21, Battle of Iquique; September 18, National Independence; September 19, Victories of Army and Navy; December 25, Christmas Day; and Church holidays.
34. Flag: Two horizontal stripes, white and red. Upper left-hand corner blue ground with silver star in center.
35. Publications: Several publications in English and other languages, and innumerable daily, weekly, and monthly publications in Spanish.
36. Diplomatic Service: Exchange Ambassador.
37. Banks (American and British branches):
Antofagasta: Anglo-South American Bank, Ltd.
Santiago: National City Bank of New York; Anglo-South American Bank, Ltd.
Valparaiso: National City Bank of New York; Anglo-South American Bank, Ltd.

COLOMBIA

1. Historical Review: First visited by Columbus in 1502; settled by Alonzo de Ojeda in 1509. War of insurrection started in 1811, the principal leader being the famous Liberator, Simon Bolivar. In Colonial days the Republic was called the Vice-Royalty of New Granada. It gained its independence from Spain in 1819, when it combined with Venezuela and Ecuador to form the Greater Colombia, which continued until 1832. Colombia was formerly in possession of the Panama Canal zone which has recently been separated to form the Republic of Panama.
2. Area: 476,916 square miles. 13.2 inhabitants per square mile. Fifth largest of South American republics. Nine times as large as New York, twice as large as Texas.
3. Physical Contour: Occupies northwestern corner of the continent, bounded on north by Caribbean Sea, on east by Venezuela and Brazil, on south by Peru and Ecuador, on west by Panama and Pacific Ocean. Has a coast line of about 3,100 miles on Caribbean Sea and Pacific Ocean. Three ranges of mountains, which extend in north-easterly to south-westerly direction, divide the country into as many sections. Latitude 13° north to 3° S.; longitude 68° to 79° W.
4. Principal Bodies of Water: Rivers: Magdalena (navigable for over 900 miles), Cauca, Atrato, and Orinoco.

5. RAILWAYS: Nineteen lines of railway, 900 miles. Numerous new lines planned.
6. METHOD OF TRAVEL: Much of inland travel on rivers.
7. CLIMATE: Caribbean coast and eastern section tropical; center, temperate climate; Pacific coast section, tropical and temperate.
8. FORM OF GOVERNMENT: Republic.
   President: Elected by direct vote of people for a term of four years; ineligible for immediate re-election.
   Senate: Thirty-four Senators, one for every 120,000 inhabitants; elected indirectly for four years.
   Representatives: Ninety-two, elected by people, one for every 50,000 inhabitants; serve for two years.
   Ministers: Interior, Foreign Affairs, Finance and Public Credit, War, Industries, Public Instruction and Sanitation, Mails and Telegraphs, Public Works.
9. PRESIDENT: Miguel Abadía Méndez, to serve until August 7, 1930.
10. DEPARTMENTS, INTENDENCIAS, AND COMISARIAS:
   Departments: Antioquia, Atlantico, Bolivar, Boyacá, Caldas, Cauca, Cundinamarca, Huila, Magdalena, Nariño, Santander, Santander Norte, Tolima, Valle del Cauca.
   Intendencias: Choco, Meta, San Andres.
   Comisarias: Arauca, Caquetá, Goajira, Juradó, Putumayo, Urabá, Vaupés, Vichada.
11. PRINCIPAL CITIES: Bogotá (Capital), 143,994; Medellin, 79,146; Barranquilla, 65,000; Cartagena, 51,382; Cali, 45,825; Manizales, 44,000.
12. PRINCIPAL PORTS: Puerto Colombia, Cartagena, Santa Marta, Buenaventura.
13. POPULATION: 5,855,077.
14. INHABITANTS: 50 per cent. white, mainly of Spanish descent; 50 per cent. mestizos, Indians, and negroes.
15. INDUSTRIES AND MANUFACTURE:
   Agriculture: Coffee, sugar, cotton, cacao, fruits, bananas, cocoanuts, tobacco, medicinal plants, timber, vegetable ivory, rubber.
   Mining: Platinum (second largest producer in the world), emeralds, gold, silver, coal, petroleum, mercury, iron, lead.
16. IMPORTS AND EXPORTS: In 1924, United States took 88 per cent. of exports, supplied 54 per cent. of imports.
17. EDUCATION: Gratuitous but not compulsory. Nearly all secondary schools maintained or assessed by nation are entrusted to religious corporations of the Catholic church.
18. RELIGION: Roman Catholic predominates, but other forms of religion permitted if exercised "not contrary to Christian morals nor to law."
19. LANGUAGE: Spanish.
20. HOTELS:
   Bogotá: Blume, Europa.

Cartagena: Americano, Washington.
Medellin: Europa, Regina.
Barranquilla: Gran Suiza, Pension Inglesa, La Mariana.

21. Commercial Establishments: Interesting in principal cities.
22. Hospitals:
Bogotá: San Juan de Dios, Military, Misericordia, San José, Casa de Salud.
Cartagena: Bernett, Caridad, Maternity, Cartagena General.
Medellin: Casa de Salud la Samaritana, Noel Clinic, Medellin, San Juan de Dios.
23. Medical Schools: Bogotá, Medellin, Cartagena.
24. Principal Points of Interest:
Bogotá: President's Palace, Independence Park, Cathedral, Municipal Theater, Calle Real, National Capitol, Bolivar Temple, Plaza Bolivar, National Library and Museum, and other artistic government buildings, statues, and attractive mountainous environment.
Cartagena: Ancient wall to city and picturesque buildings of Spanish-Colonial architecture. Easily accessible.
Santa Marta: Founded in 1525; house in which Bolivar passed away. Monument also near by. Great banana plantations of United Fruit Company. Coffee plantations in Sierra Nevada.
Magdalena River: One of three most important rivers in South America, with numerous methods of transportation.
Emerald mines near Muzo.
Quindido Pass: One of the most wonderful passes through entire Andes.
Cauca Valley: Fertile and beautiful valley made famous by Jorge Isaacs in novel "Maria."
Snow Mountains: Santa Marta, Huila, Tolima, El Quindio.
Tequendama Falls near Bogotá.
25. Street and Motor Cars:
26. Coins: Gold and paper peso (100 centavos) equals $0.973 United States. Condor, 10 pesos; Double Condor, 20 pesos; Medio Condor, 5 pesos; Cuarto Condor, 2½ pesos. Silver: 50, 20, 10 centavos. Nickel: 5, 2, 1 centavos.
27. Weights and Measures: Metric system.
28. Postage: From Colombia to United States: 3 centavos (gold) ½ ounce; 3 centavos each additional unit or fraction. To Colombia from United States: 2 cents per ounce.
29. Mail Time: Fourteen days from New York to Santa Marta.
30. Cable Rates: From New York, full rate, 40 45 cents a word, depending upon destination in Colombia; deferred rate, 20 25 cents.
31. Wireless: Bogotá, Medellin, Cucuta, Cali, Puerto Colombia, Santa Marta, Cartagena, Island of San Andres.
32. Difference in Time: Three minutes east of New York.
33. Holidays: In addition to Church holidays, following are observed: January 1, New Year's Day; July 20, Independence

Day; July 24, Birthday of Bolivar; August 1, Founding of Bogotá (Bogotá only); August 7, Battle of Boyaca; October 12, Discovery of America; November 1, Independence of Cartagena; December 25, Christmas Day.

34. Flag: Three horizontal stripes: Upper one-half yellow, middle one-fourth dark blue; lower one-fourth, dark red. Coat of Arms in center.
35. Publications: Numerous daily papers in all larger cities.
36. Diplomatic Service: Exchange Minister.
37. Banks (American and British branches):
Bogotá: Mercantile Bank of Americas; National City Bank of New York.
Barranquilla: National City Bank of New York.
Medellin: National City Bank of New York.

COSTA RICA

1. Historical Review: Columbus, on his fourth and last voyage in 1502, landed in Costa Rica, but the aborigines soon destroyed the small settlement which he founded. The country was again settled in 1540, and in 1565 a Governor was appointed and Spanish rule established over practically the entire country which was later united with Guatemala to form a part of the viceroyalty of New Spain. The independence of Costa Rica was declared on November 12, 1821, at which time it became a state of the Central American Federation, and was annexed by the Emperor of Mexico. On April 1, 1829, Costa Rica withdrew from the Federation and proclaimed her constitution on January 21, 1847. The present constitution was adopted in 1871, with slight additions since that time.
2. Area: 23,000 square miles. 21 inhabitants to the square mile. One-half as large as New York State.
3. Physical Contour: Bounded on north by Nicaragua, on east by Caribbean Sea and Panama, on south and west by Pacific Ocean. The mountain range which extends the entire length of the country is the predominant feature. Lies in latitude 8°12′ to 11° N.; longitude 83° to 86° W.
4. Principal Bodies of Water: Sixteen navigable rivers, the most important being the San Juan. Lake Nicaragua along northern border.
5. Railways: About 450 miles of railway, one transcontinental.
6. Method of Travel: Railways and river navigation.
7. Climate: Varies from tropical heat of the coast to the refreshing coolness of the high interior plateaus.
8. Form of Government: Republic.
President: Elected by direct popular vote for four years and not eligible for a second consecutive term. (There is no Vice-President.)

Constitutional Congress: Composed of forty-three deputies, one for each 15,000 inhabitants. Elected by direct vote of the people for four years.

Cabinet: Secretaries of Foreign Affairs, Worship and Charity; Justice, Interior and Police; Finance and Commerce; War and Navy; Promotion; Public Instruction.

9. PRESIDENT: Don Ricardo Jimenez. Term ends May, 1928.
10. PROVINCES: Alajuela, Cartago, Guanacaste, Heredia, Limón, Puntarenas, San José.
11. PRINCIPAL CITIES: San José (Capital), 54,273; Cartago, 19,049; Heredia, 13,608; Alajuela, 13,505; Limón, 11,786.
12. PRINCIPAL PORTS: Limón on the Caribbean Sea; Puntarenas on the Pacific Ocean.
13. POPULATION: 498,435. Equal to population of New Jersey.
14. INHABITANTS: Of European descent; many of pure Spanish blood; about 18,000 British West Indians.
15. INDUSTRIES AND MANUFACTURE:
    Agriculture: Bananas, coffee, cacao, tobacco, sugar, indigo, rice and cocoanuts.
    Mining: Gold, silver.
    Forest Products: Rubber and woods.
    Manufacture: Shoes, tile, brick, furniture for domestic consumption.
    Live Stock.
16. IMPORTS AND EXPORTS: United States in 1924 supplied 56.7 per cent. of the imports and took 47.9 per cent. of the exports.
17. EDUCATION: Elementary education free and compulsory. Public instruction regulated by the government, but primary schools provided and maintained by local school councils. In 1922 there were 398 public primary schools, with an enrollment of 38,012 pupils and 1,332 teachers. Secondary instruction (6-year course) is offered at San José, and partial high-school facilities at Cartago, Alajuela, and Heredia. There is no university, but the capital is the seat of schools of law, medicine, dentistry, pharmacy, engineering, fine arts, agriculture, and commerce.
18. RELIGION: Roman Catholic is state religion, but there is entire religious freedom.
19. LANGUAGE: Spanish.
20. HOTELS:
    Port Limón: Lodge, Caribe.
    San José: Washington, Francais.
21. COMMERCIAL ESTABLISHMENTS: In the principal cities.
22. HOSPITALS:
    Alajuela: Alajuela.
    Cartago: General.
    Limón: Limón.
    San José: San Juan de Dios, Victory Private Clinic.
23. MEDICAL SCHOOLS: San José, Cartago, Alajuela.

24. Principal Points of Interest:
San José: National Theater, Cathedral, Chapui Asylum. The streets present a varied picture and the parks are animated.
Cartago: A mountain resort.
Trips: From Limón or Puntarenas to San José is one of the most interesting trips in Latin America, as it is possible to pass from ocean to ocean. From the top of Irazu peak on a clear day both oceans may be seen.
25. Street and Motor Cars: Two street railways in San José, one extending to Guadalupe.
26. Coins: Gold standard. The colon, 100 centimos, equal to $0.465 U.S. gold. Coins are of 20, 10, 5, and 2 colonies in gold; of 50, 25, 10, and 5 centimos in silver; with a copper coin of 1 centimo. Paper bank notes in general use.
27. Weights and Measures: Metric system.
28. Postage: From Costa Rica to United States: 5 centimos each 15 grams; 5 centimos each additional unit or fraction. To Costa Rica from United States 2 cents per ounce.
29. Mail Time: 9 days from New York to Port Limón.
30. Cable Rates: From New York: 40 cents a word, full rate; 20 cents, deferred rate; 11¼ cents, week-end letter.
31. Wireless: Limón and Colorado.
32. Difference in Time: Approximately one hour west of New York City.
33. Holidays: New Year's Day; April 11, Battle of Rivas; May 1, Surrender of General Walker; July 14, Fall of the Bastille; September 15, Central American Independence Day; October 12, Columbus Day; December 25, Christmas Day; December 29, 30, 31, Bank Holidays; many feasts of the Roman Catholic Church are also observed.
34. Flag: Five horizontal bars: dark blue, white, red, white and dark blue. The red bar is twice the width of the others.
35. Publications: San José, Cartago, Limón, Puntarenas. One paper in English.
36. Diplomatic Service: Exchange Minister.
37. Banks: *San José:* Royal Bank of Canada, Costa Rican, Banco Internacional de Costa Rica.

CUBA

1. Historical Review: Cuba was discovered by Columbus on his first voyage of exploration, on October 28, 1492, and he took possession of the country in the name of the King of Spain. In 1611, a Governor was appointed. Cuba was the strategic point from which numerous expeditions, including that of Cortes, started for the mainland, and Havana became the rendezvous for the Treasure ships. Havana withstood the

attacks of the French, Dutch, and British buccaneers during the sixteenth and seventeenth centuries, but surrendered to a British army on August 12, 1762. A year later Cuba was restored by treaty to the Spanish authorities. Cuba's struggle for independence lasted for 80 years, until the intervention of the United States resulted in the war with Spain in 1898. The constitution of the Republic was proclaimed on February 21, 1901, and the first president inaugurated on May 20, 1902.

2. AREA: 44,164 square miles. 73 inhabitants to the square mile. Approximately the same size as the State of Pennsylvania.
3. PHYSICAL CONTOUR: 760 miles long; width varies from 25 to 124 miles. Bounded on the north by the Gulf of Mexico and Straits of Florida, on the east by the Atlantic Ocean, on the south and west by the Caribbean Sea. Three mountain ranges traverse the island, forming fertile and healthful plateaus and valleys. Is situated in latitude 19°48′ and 23°12′ N.; longitude 74°2′ and 84°59′ W.
4. PRINCIPAL BODIES OF WATER: Most of the rivers are too short and too swift for navigation. River Cauto is navigable for 50 miles; Sagua la Grande navigable for 20 miles.
5. RAILWAYS: About 3,000 miles of railway; four principal systems.
6. METHOD OF TRAVEL: Railway; local steamers connect Cuban ports; automobile and saddle horse.
7. CLIMATE: Remarkably moderate and uniform, due to the influence of the prevailing winds, and the equalizing effect of the surrounding ocean.
8. FORM OF GOVERNMENT: Republic.
   President: Elected indirectly for a period of four years. Not eligible for third consecutive term.
   Vice-President: Elected in the same manner, for the same period of time. He is president of the Senate, but votes only in case of a tie.
   Senate: Composed of 4 members from each province (24 in all), elected indirectly for a term of eight years. The Senate is renewed by halves every four years.
   House of Representatives: Consists of one member for each 25,000 inhabitants, or fraction thereof over 12,500, elected for a term of four years. The House is renewed by halves every two years.
   Cabinet: Secretaries of State; Justice; Government; Treasury; Fine Arts; Health and Charities, War and Marine; Public Works; Agriculture, Commerce and Labor; Public Instruction.
9. PRESIDENT AND VICE-PRESIDENT: President, General Gerardo Machado y Morales; Vice President, Señor Carlos de la Rosa. Terms expire 1929.
10. PROVINCES: Camaguey, Havana, Matanzas, Oriente, Pinar del Rio, Santa Clara. Isle of Pines.

11. Principal Cities: Havana (Capital), 432,353; Santiago, 73,800; Camaguey, 41,909; Matanzas, 41,574; Cienfuegos, 37,241.
12. Principal Ports: Havana, Santiago de Cuba, Matanzas, Cienfuegos, Nipe, Guantanamo.
13. Population: 3,308,023. It is one of the most densely populated of the American republics.
14. Inhabitants: White and colored races.
15. Industries and Manufacture:
Agriculture: Tobacco, sugar, pineapples, oranges, grapefruit, tomatoes.
Mining: Iron, copper, manganese, gold, asphalt, mercury, zinc, lead.
Forest Products: Mahogany, cedar.
Sponge Industry.
Live Stock: Stock, poultry, and bees.
16. Imports and Exports: United States in 1924 supplied 66 per cent. of the imports and took 83 per cent. of the exports.
17. Education: Elementary education is compulsory. Primary school course, 8 years, secondary schools, 4 years. Higher education offered by University of Havana and other schools in that city.
18. Religion: No state church: Roman Catholics predominate.
19. Language: Spanish.
20. Hotels:
Havana: Seville, Plaza, Inglatera, Almendares, Cecil.
Camaguey: Hotel Camaguey.
Cienfuegos: Gran Union.
Santiago de Cuba: Casagranda.
21. Commercial Establishments: Varied and most interesting.
22. Hospitals:
Cardenas: Santa Isabel.
Cienfuegos: Civil, Spanish.
Havana: Emergency, Municipal, Calixto Garcia, Covadonga Sanitarium, Mercedes, Asuncion Arenal for Women, Cancer Institute, La Beneficencia, National Policlinic, Maternity, Anglo-American, La Purisma Concepción, Damas Católico, Hospitals of Spanish Association, Aragón Clinic.
Santiago de Cuba: Civil, Provincial, Centro Gallego Sanatorium, Spanish Colony Sanitarium.
23. Medical Schools: University of Havana.
24. Principal Points of Interest:
Havana: Palace of the President, Convent of San Francisco, House of Representatives, the national theater, the two markets Tacon and Colon, and the various theaters, clubs, and private mansions, parks, avenues, and promenades; El Templete where first mass was sung and first town council met in 1519; Cathedral Square where an old church erected by the Jesuits was in 1789 converted into the

Cathedral. Here rested the remains of Columbus before their removal to Spain. Colon Cemetery contains monuments to Generals Gomez and Garcia. Back of the chapel the victims of the Maine were buried until their removal to Arlington.

Santiago: Famous land-locked bay.

Matanzas: Attractive plaza and fine buildings; in the neighborhood are the famous caves of Bellamar.

Trips: 1,400 miles of splendid mountain roads and driveways, shaded by rows of laurel, royal poinciana, and almond trees.

25. Street and Motor Cars: Electric street railways in Havana, Santiago, Camaguey, and Cienfuegos.
26. Coins: Gold standard. Unit is the gold peso, equal to the American dollar. Coins are in the denominations of $20, $10, and $5 gold; $1; 40, 20, and 10 cents silver; and 5, 2, and 1 cent nickel.
27. Weights and Measures: Metric system.
28. Postage: From Cuba to United States: 2 centavos each ounce; 2 centavos each additional ounce or fraction. To Cuba from United States: 2 cents per ounce.
29. Mail Time: 3 days from New York to Havana.
30. Cable Rates: From New York: 12 cents a word, full rate; 8 cents, deferred rate.
31. Wireless: Government maintains 9 wireless stations.
32. Difference in Time: Approximately the same as New York City.
33. Holidays: January 1, New Year's Day; February 24, Revolution of Baire; May 20, Independence Day; October 10, Revolution of Yara; December 7, Death of Maceo; December 25, Christmas Day; and Church holidays.
34. Flag: Five horizontal bars, alternating dark blue and white. At the staff end is a red equilateral triangle upon which is blazoned a white star.
35. Publications: 81 newspapers and periodicals published in Havana. Many provincial publications.
36. Diplomatic Service: Exchange Ambassador.
37. Banks (American and British Branches): Royal Bank of Canada, National City Bank of New York, Canadian Bank of Commerce, Bank of Nova Scotia.

DOMINICAN REPUBLIC

1. Historical Review: The Island of Santo Domingo was sighted by Columbus on his first voyage and remained in the possession of the Spanish until 1697, when France obtained possession of the western half of the island, and, in 1795, of the eastern or Spanish half. In 1809 Spanish rule was again established in the eastern part of the island and in 1821 independence from Spain

was declared. In 1822 the President of Haiti was able to extend his government over the whole island. In 1916, there occurred a military occupation by American forces, but in 1924, following a general election, the American forces were withdrawn and the Dominican Republic was restored to full and complete sovereignty.

2. Area: 19,325 square miles. 46 inhabitants per square mile. Equal in size to Vermont and New Hampshire.
3. Physical Contour: 390 miles long; 165 miles at widest point. It has 1,017 miles of coast line and 193 miles of frontier line with Haiti. Situated in the eastern end of the Island of Haiti in the Greater Antilles, bounded on the west by the Republic of Haiti and separated from Porto Rico by Mona Passage. Four almost parallel mountain ranges traverse the country. Lies in latitude 17°37′ and 19°54′ N.; and in longitude 68°18′ and 72° W.
4. Principal Rivers: Yaque del Norte, Yuna, Yaque del Sur, and many others.
5. Railways: 153 miles of railways and about 255 miles of private lines on the large estates.
6. Methods of Travel: Railways and to some extent motoring.
7. Climate: The tropical climate is modified by the altitude of the interior, and almost constant sea breezes make it pleasant and healthful.
8. Form of Government: Republic.
   President: Elected every four years by direct vote and is ineligible to succeed himself as president or to succeed to the vice-presidency for the term immediately following. All male citizens over the age of 18, or married men even though that age has not been reached, are entitled to exercise the right of suffrage.
   Vice-President: Elected at the same time and in the same manner as the president. He succeeds the latter in case of a vacancy.
   Senate: 12 members, one from each province, elected by direct vote for four years.
   Chamber of Deputies: Members are elected by direct vote for four years, one for every 30,000 inhabitants or fraction thereof more than 15,000.
   Cabinet: Secretaries of the Interior, Police, War and Marine; Foreign Affairs; Finances and Commerce; Justice and Instruction; Public Works and Communication; Agriculture and Immigration; Sanitation.
9. President and Vice-President: General Horacio Vasquez; Vice-President: Frederico Velasquez. Terms expire in 1928.
10. Provinces: Azua, Barahona, Espaillat, La Vega, Monte Cristi, Pacificador, Puerto Plata, Samaná, San Pedro de Macoris, Santiago de los Caballeros, Santo Domingo, Seybo.
11. Principal Cities: Santo Domingo (Capital), 45,000; San Pedro de Macoris, 14,000; Santiago, 17,000; Puerto Plata, 8,000.

12. Principal Ports: Monte Cristi, Puerto Plata, Barahona, Sanchez, San Pedro de Macoris, Santo Domingo, Azua.
13. Population: 894,665 inhabitants.
14. Inhabitants: Some creoles, but mainly composed of mixed race of European, African, and Indian blood. Many Turks and Syrians.
15. Industries and Manufacture:
Agriculture: Sugar, cacao, tobacco, coffee, honey, beeswax, molasses.
Live Stock: Hides, goatskin.
Forest Products: Logwood, mahogany, lignum vitae, some gums and resins.
16. Imports and Exports: United States in 1924 supplied 67.7 per cent. of the imports and took 30.6 per cent. of the exports.
17. Education: Primary education is free and compulsory for children from 7 to 13 years of age, wherever there are schools. Normal training is offered in the secondary schools, vocational in the industrial and commercial schools, and law, medicine, etc., at the Central University of Santo Domingo. The University of Santo Tomas de Aquino (1538) is the oldest in the world.
18. Religion: State religion Roman Catholic. Other forms permitted.
19. Language: Spanish.
20. Hotels:
Santo Domingo: Francis, Inglaterra, America.
21. Commercial Establishments: Interesting in larger cities.
22. Hospitals:
San Pedro de Macoris: San Antonio.
Santiago: Spanish.
Santo Domingo: Padre Bellini, National, Military.
23. Medical Schools: Faculty of Medicine, Central University of Santo Domingo.
24. Principal Points of Interest:
Santo Domingo: "House of the Admiral" (1508, built by Diego, the son of Christopher Columbus). Church of San Nicolas (1502, the oldest Christian Church in America). Church of San Francisco (1504, next oldest church ruin in all the Americas. Remains of Bartholomew Columbus were interred there). The Cathedral (erection ordered by Ferdinand and Isabella in 1506. Begun in 1514. Remains of Christopher Columbus were interred in the Cathedral and presumably remain there).
San Pedro de Macoris: Most modern city in the republic.
25. Motor Cars: Available in principal cities.
26. Coins: Unit is gold peso, equal to $1.00 United States; paper of variable exchange value. United States currency in general use.
27. Weights and Measures: Metric system.

28. Postage: From Dominican Republic to United States: 2 centavos each ounce; 2 centavos each additional ounce. From United States to Dominican Republic: 2 cents per ounce.
29. Mail Time: About seven days from New York.
30. Cable Rates: From New York, 50 to 58 cents a word, full rate.
31. Wireless: Santo Domingo, San Pedro de Macoris, La Romana, etc.
32. Difference in Time: Approximately the same as New York City.
33. Holidays: January 1, New Year's Day; February 27, Founding of the Republic; July 5, Memorial Day; August 16, War for Independence; October 12, Discovery of America; December 25, Christmas Day; and Church holidays.
34. Flag: A white cross divides the flag into four rectangles; those at the staff end are square, the upper being dark blue, the lower red; at the opposite end the colors are reversed, the upper being red, the lower dark blue.
35. Publications: About 40 newspapers published in the Republic.
36. Diplomatic Service: Exchange Minister.
37. Banks:

Santo Domingo: Royal Bank of Canada; International Banking Corporation of New York; Banco Territorial y Argicola de Puerto Rico; Bank of Nova Scotia.

San Pedro de Macori: Royal Bank of Canada, Bank of Nova Scotia.

ECUADOR

1. Historical Review: The Republic of Ecuador was constituted in 1830 in consequence of the civil war which separated the members of the original Republic of Colombia, founded by Simon Bolivar, and united the Presidency of Quito to the Vice-Royalty of New Granada (see Colombia). Present constitution was promulgated in December, 1906.
2. Area: 116,000 square miles. As large as New England states and New York; twice as large as Illinois. 13 inhabitants per square mile. Also comprises Galapagos Islands, 580 miles from mainland (five large and two small islands with an area of 2,870 square miles). Smallest South American country, excepting Uruguay.
3. Physical Contour: On west coast of South America; bounded on north and northeast by Colombia; on south by Peru; on west by Pacific Ocean. Two parallel ranges of mountains from north to south five hundred miles in length divide the country into three distinct regions, with as many varieties of soil and climate. Latitude 2° N. to 6° S.; longitude 73° to 81° W.
4. Principal Bodies of Water: Amazon (navigable almost in entirety), Guayas (navigable 40 miles), Daule, and Esmeraldas rivers.

5. Railways: 400 miles of railway, mostly government owned.
6. Method of Travel: Roads of the country are for most part traversible only by mule. River navigation in agricultural district furnished by sidewheel and screw steamers on Guayas, Daule, and Vinces rivers.
7. Climate: West coast hot and humid throughout the year, although the Humboldt Current modifies this considerably. Inland, perpetually spring-like.
8. Form of Government: Similar to United States.
   President: Elected by direct vote for term of four years, and can be re-elected only after a lapse of two terms.
   Senators: Thirty-two, two for each Province; four years of service, elected by direct vote.
   Chamber of Deputies: Fifty-three members, 1 for each 30,000 inhabitants; two years of service, elected by direct vote.
   Cabinet: Ministers of Interior, Foreign Relations, Public Instruction, Treasury, and War, Navy and Aviation.
9. President: (Provisional) Dr. Isidro Ayora. Term expires August 31, 1928.
10. Provinces: Azuay, Bolivar, Cañar, Carchi, Chimborazo, Esmeraldes, Guayas, Imbabura, León, Loja, Los Rios, Manabi, Napo-Postaza, Oriente, Oro Pichincha, Santiago-Zamora, Tungurahua, Galapago (territory).
11. Principal Cities: Guayaquil, 100,000; Quito (Capital), 80,702; Cuenca, 40,000; Riobamba, 12,000.
12. Principal Port: Guayaquil.
13. Population: About 2,000,000. One-fourth the population of Illinois.
14. Inhabitants: One-half to three-fourths Indians; 350,000 mestizos; 150,000 whites; and small number of negroes.
15. Industries and Manufacture:
   Agriculture: Cacao (world's chief source), vegetable ivory, coffee, sugar, cotton, fruits, grapes.
   Forestry: Rubber, hardwoods.
   Live Stock.
   Mining: Extensive resources in oil, gold, sulphur, coal, but not highly developed.
   Principal Manufacture: Panama hats; textile.
16. Imports and Exports: In 1924 the United States supplied 37 per cent. of the imports and took 31 per cent. of the exports.
17. Education: Primary education gratuitous and obligatory; primary course, 6 years; secondary, 6 years; normal, 5 years; Central University of Quito.
18. Religion: State recognizes no religion, but grants freedom to all worship.
19. Language: Spanish.
20. Hotels:
   Guayaquil: Ritz, Tivoli.
   Quito: Metropolitana, Estrangero.
   Cuenca: Continental.

21. Commercial Establishments: Interesting in the larger cities.
22. Hospitals:
Quito: Nuevo Hospital Civil, Maternidad, Private Hospital of Drs. Ayora and Villavicencio.
Guayaquil: General, Maternity, and Children's; Asilo Lorenzo Ponce.
23. Medical Schools: University of Guayas, Guayaquil; University Central of Quito; University of Azuay, Cuenca.
24. Principal Points of Interest:
Guayaquil: Cathedral and other churches, Library, Museum, Union Club, Pichincha Street, Statue of General Sucre, plazas which are unusually attractive with their luxuriant tropical foliage. Railroad passes through a very wonderful mountainous country from Guayaquil to Quito; beautiful views. Highest point en route, Urbina, 11,000 feet above sea level.
Quito: Municipal building, national palace, Mount Pichincha (16,000-foot elevation), at foot of which lies Quito, Palace of Justice, Archbishop's Palace, Observatory, National Library, and many buildings of interesting architecture. Many famous cacao plantations; Jipijapa and Monte Christi, whence the majority of the Panama hats come; Cotopaxi, active volcano; Chimborazo, one of the most famous volcanoes in the world.
25. Street and Motor Cars: Street cars and taxicabs in principal streets.
26. Coins: Gold sucre, 100 centavos, equals $0.487 United States. Condor, 10 sucres. Silver: Peseta, .20; real, .10; medio real, .05. Nickel: 5, 2, 1, and ½ centavos.
27. Weights and Measures: Metric system.
28. Postage: From Ecuador to United States: 5 centavos ¾ ounce; 5 centavos each additional unit or fraction. From United States to Ecuador: 2 cents per ounce.
29. Mail Time: 11 days to Guayaquil, via Panama, from New York.
30. Cable Rates: From New York: 50 cents a word, full rate; 25 cents, deferred rate.
31. Wireless: Guayaquil, Quito, Esmeraldes, Machala. Further stations projected.
32. Difference in Time: Quito similar to New York.
33. Holidays: January 1, New Year's Day; February 14, National Holiday; May 24, Separation from Colombia; July 20, Battle of Pichincha; August 10, Independence of Quito; Opening of Congress; September 18, Separation from Chile; October 9, Independence of Guayaquil; October 12, Discovery of America; December 25, Christmas; and Church holidays.
34. Flag: Three horizontal stripes. Upper one-half, yellow; center one-fourth, dark blue; lower one-fourth, dark red.
35. Publications: Principal: Quito, *El Comercio;* Guayaquil, *El Telegrafo.* No newspapers in English.

36. Diplomatic Service: Exchange Minister.
37. Banks (American and British branches):
Guayaquil: Anglo-South American Bank; Commercial Bank of Spanish America.

GUATEMALA

1. Historical Review: Guatemala was conquered by Alvarado, a lieutenant of Cortez, in 1524. It comprised all the territory now known as Central America, as well as the Mexican states of Chiapas and Yucatan. It became a captain-generalcy, at first independent, but later under the authority of the Viceroy of Mexico. After several unsuccessful attempts at establishing and maintaining independence, Guatemala was once more free to choose its own form of government when Mexico became a Republic. On July 1, 1823, a constituent congress declared that Guatemala should form an independent nation under the title of the Central American Federation, embracing the present states of Guatemala, Honduras, Salvador, Nicaragua, and Costa Rica. One by one the states seceded and Guatemala finally established an independent government on April 17, 1839.
2. Area: 48,290 square miles. 42 inhabitants to the square mile. Approximately as large as North Carolina.
3. Physical Contour: Bounded on the north by Mexico and the Gulf of Honduras; on the east by British Honduras, Honduras, and Salvador, on the south by the Pacific Ocean, and on the west by Mexico. A chain of mountains traverses the country and, with its spurs, forms numerous high plateaus. Excepting a small strip along the coast, the country is at an altitude of 4,000 to 11,500 feet. Lies in latitude 13°42′ to 17°49′ N.; longitude 88°10′ to 92°30′ W.
4. Principal Bodies of Water: Lakes: Atitlan, Amatitlan, Izabal. The Dulce River.
5. Railways: 563 miles of railway, practically all owned by International Railways of Central America.
6. Method of Travel: Railways, some river navigation, motor, stage coach.
7. Climate: In the interior, pleasant and healthful; along the narrow coast lines, tropical.
8. Form of Government: Republic.
President: Elected by direct vote for six years. (There is no vice-president.)
National Assembly: Consists of one chamber only, composed of 69 members, 1 for every 20,000 inhabitants or fraction thereof over 10,000, elected by direct vote of the people for four years. Renewed by halves every two years.
Cabinet: Secretaries of Foreign Relations, Government and Justice, Treasury and Public Credit, War, Public Instruction, Promotion, Agriculture.

Council of State: 16 members, including 7 secretaries, 5 councilors appointed by the assembly, and 4 appointed by the president.

9. PRESIDENT: Gen. José Maria Orellana. Term expires 1928.
10. DEPARTMENTS: Alta Vera Paz, Amatitlan, Baja Vera Paz, Chimaltenango, Chiquimula, Escuintla, Guatemala, Huehuetenango, Izabal, Jalapa, Jutiapa, Petén, Quezaltenango, Quiché, Retal Huleu, Sicatepéquez, San Marcos, Santa Rosa, Sololá, Suchitepequez, Totonicapán, Zacapa.
11. PRINCIPAL CITIES: Guatemala City (Capital), 116,000; Quezaltenango, 30,000; Totonicapán, 30,000; Coban, 27,000.
12. PRINCIPAL PORTS: Puerto Barrios, San José de Guatemala, Livingston, Champerico.
13. POPULATION: 2,004,900; comparable with the State of Indiana in 1920.
14. INHABITANTS: Many pure Indians and half castes.
15. INDUSTRIES AND MANUFACTURE:
Agriculture: Coffee, bananas, sugar, corn, cacao.
Forest Products: Rubber, woods.
Live Stock: Cattle hides, skins.
16. IMPORTS AND EXPORTS: The United States in 1924 supplied 63 per cent. of the imports and took 50 per cent. of the exports.
17. EDUCATION: Primary is free and compulsory. About 73,000 pupils and 2,400 elementary schools Primary course, 6 years; 11 "Institutos Nacionales" offering a secondary school course of five years. Six normal schools maintained by the government, a National University at Guatemala City, and various trade schools for boys and girls.
18. RELIGION: Roman Catholic prevails; all other creeds tolerated.
19. LANGUAGE: Spanish; the use of English is increasing and it is taught in many of the schools.
20. HOTELS:
Guatemala City: Palace, Gran, Geroult.
Coban: Victoria.
Puerto Barrios: Del Norte.
21. COMMERCIAL ESTABLISHMENTS: In larger cities interesting and varied.
22. HOSPITALS: *Guatemala City:* General, Isolation, Military, Leprosarium, American.
23. MEDICAL SCHOOLS: Faculty of Medicine, Guatemala City.
24. PRINCIPAL POINTS OF INTEREST:
Guatemala City: Plaza de Armas, the cathedral, old palace, museum, the theater, university, Temple of Minerva.
Trips: From the capital to ancient Antigua. Inland by stage coach or in the saddle revealing the life of the native Indians of Guatemala, as well as the scenic beauties.
25. MOTOR CARS: From Guatemala to Antigua. Highways generally are being improved for motor traffic.
26. COINS: Unit, silver peso of 100 centavos. For all commercial transactions the paper peso is used. Gold coins, 5, 2½, 1 peso

($0.9642, differing from the silver peso); silver, 1, ½, ¼ pesos, and nickel and copper reales (12½ centavos).

27. Weights and Measures: Metric system.
28. Postage: From Guatemala to United States: 125 centavos each 20 grams; 62½ centavos each additional unit. From United States to Guatemala: 2 cents per ounce.
29. Mail Time: Approximately 7 days from New York to Guatemala City.
30. Cable Rates: From New York: 40 cents a word, full rate; 20 cents, deferred rate; 11½ cents, week-end letter.
31. Wireless: A wireless station in course of construction near the capital.
32. Difference in Time: One hour west of New York City.
33. Holidays: New Year's Day; June 30, Reform Day; September 15, Independence Day; October 12, Discovery of America; October (3 days following last Sunday), Minerva Feast; Christmas Day. Feast days of Roman Catholic Church are also observed.
34. Flag: Three vertical bars of light blue, white, and light blue.
35. Publications: Published in Guatemala City and Quezaltenango.
36. Diplomatic Service: Exchange Minister.
37. Banks: *Guatemala City:* Commercial Bank of Spanish America, Ltd., London Mercantile Bank of the Americas, Inc., New York Banco Americano de Guatemala.

HAITI

1. Historical Review: The island was discovered by Columbus on his first voyage and remained as a whole under Spanish dominion for 200 years. French buccaneers made frequent invasions and even established settlements. In 1697 Spain ceded to France the country held by the adventurers. In 1801 a constitution was promulgated, and the struggle for independence began and in 1803 the French withdrew. An empire, a kingdom, and a republic were established in rapid succession, the territory including at one time all of the island. In 1844 the Dominicans separated from Haiti and set up an independent republic. In 1849 Haiti again became an empire, but upon the flight of the emperor in 1859 a republic was once more established. In September, 1915, a treaty between Haiti and the United States was signed providing that the President of Haiti shall appoint, upon the nomination of the President of the United States, certain officials.
2. Area: 10,200 square miles. 200 inhabitants to the square mile. Slightly larger than South Carolina.
3. Physical Contour: Situated in the western end of the Island of Haiti in the Greater Antilles, fifty miles southeast of Cuba; bounded on the east by the Dominican Republic and separated

from Cuba by the Windward Passage. The country is U-shaped inclosing the Gulf of Gonaives and affording numerous natural harbors. Lies in latitude 17°56′ and 20°0′ N.; longitude 71°30′ and 74°28′ W.

4. Principal Bodies of Water: Gulf of Gonaives. Artibonite is the only river navigable for any distance. The Trois Rivières and Grand Anse have swift currents. Lake Azney is navigable.
5. Railways: Approximately 175 miles of railway.
6. Method of Travel: Railways, river navigation, and highways (625 miles).
7. Climate: Generally tropical, but pleasant and healthful even in summer.
8. Form of Government: Republic.
   President: Elected for term of four years by the legislative assembly.
   Council of State: 21 members appointed by the President. (Since 1918, the President must fix the date of election of the legislative body, but up to the present time he has failed to do so, and the Council of State exercises the legislative powers.)
   Officials: Following the treaty of 1915 the President of Haiti shall appoint, upon the nomination of the President of the United States, a receiver of customs, a financial adviser to the Minister of Finance, American officers in charge of a Haitian constabulary, engineers to supervise public works and sanitation.
9. President: M. Joseph Louis Borno. Term expires 1930.
10. Departments: North, Northwest, Artibonite, West, South.
11. Principal Cities: Port au Prince (Capital), 125,000; Cape Haitien, 20,000; Aux Cayes, 15,000.
12. Principal Ports: Port au Prince, Cape Haitien, Port de Paix, Gonaives, Aux Cayes.
13. Population: 2,050,000, comparable with the State of Alabama.
14. Inhabitants: British, French, Americans, Germans, many negroes, and great numbers of mulatto Haitians.
15. Industries and Manufacture:
   Agriculture: Coffee, cacao, cotton, sugar, tobacco, orange peel, honey, lettuce, radishes, sweet corn, potatoes, etc.
   Forest Products: Lignum-vitae, mahogany.
   Live Stock: Hides and skins.
16. Imports and Exports: The United States in 1924 supplied 80 per cent. of the imports and took 9.3 per cent. of the exports.
17. Education: 896 public primary schools having 43,819 pupils; 43 schools under Catholic teaching order having 8,042 pupils; 53 private primary schools having 3,481 pupils. The secondary course comprises two cycles of three and two years respectively.
18. Religion: Roman Catholic; Catholic clergy are French.
19. Language: French.
20. Hotels: *Port au Prince:* American, Montague.
    Cafés: Caves de Bordeaux, Commercial Café, Seaside Inn.

21. Commercial Establishments: Interesting and varied.
22. Hospitals: *Port au Prince:* General Hospital.
23. Medical Schools: National School of Medicine, Port au Prince.
24. Principal Points of Interest:
    Port au Prince: Open market in Cathedral Square, iron markets, Champ de Mars, National Palace, Ministry Building, national penitentiary, aviation field, Hasco sugar plant, and residential villa district.
    Drives: From Port au Prince to Petionville, 1,000 feet elevation, one of the most picturesque spots in Haiti; Bizoton Road on western coast; St. Marc Road on northern coast.
25. Motor Cars: Port au Prince.
26. Coins: Unit, the gourde gold ($0.20). United States currency is also in general use.
27. Weights and Measures: Metric system.
28. Postage: From Haiti to United States, 25 centimes each 20 grams; 15 centimes each additional unit. From United States to Haiti, 2 cents per ounce.
29. Mail Time: 6 days from New York to Port au Prince.
30. Cable Rates: From New York to Port au Prince 50 cents a word, full rate.
31. Wireless: At Port au Prince.
32. Difference in Time: Approximately the same as New York City.
33. Holidays: January 1, New Year's and Independence Day; May 1, Labor Day; December 25, Christmas; and Church holidays.
34. Flag: Two horizontal bars, dark blue and red.
35. Publications:
36. Diplomatic Service: Exchange Minister.
37. Banks (American and British branches):
    Port au Prince: National City Bank of New York; Royal Bank of Canada.

HONDURAS

1. Historical Review: Cape Honduras was discovered by Columbus on his fourth voyage in 1502. Honduras, while under Spanish rule, suffered numerous attacks from French, British, and Dutch buccaneers. In the eighteenth century the Misskiti Indians, having defeated the Spanish forces, applied to Great Britain for protection, and in 1740 British forces occupied the Mosquito Coast. In 1786, there was an adjustment of British territory to include parts of Yucatan and Honduras, now known as "British Honduras." On September 15, 1821, the independence of the states comprising the captain generalcy of Guatemala (including Honduras) was declared. In 1822 Honduras formed a part of the Mexican Empire, and, upon its

downfall, it became one of the states of the Central American Federation. In 1824, Honduras adopted an independent constitution. In 1838, secession and absolute independence were declared, and in 1841, the first constitutional president was inaugurated. In 1921, Honduras signed the treaty which laid the foundation for a new federation of the Central American Republics, which has not yet been accomplished.

2. AREA: 46,332 square miles. 13.7 inhabitants to the square mile. The third largest of the Central American countries. Almost as large as New York State.
3. PHYSICAL CONTOUR: The country has a coast line of about 350 miles. It is bounded on the north by the Caribbean Sea, on the east and south by Nicaragua, on the south by Salvador, and on the west by Guatemala. It is mountainous throughout. Lies in latitude 13° 10′ to 16° 2′ N.; between longitude 86° and 92° W.
4. PRINCIPAL BODIES OF WATER: Chamelcon, Humuya, Ulua, Agua Negro, Tinto, Patuca, Wanks, Choluteca, Nacaome and Goascoran are the most important rivers, being more or less navigable. Lake Yojoa is navigable for steamers.
5. RAILWAYS: About 934 miles of railway.
6. METHOD OF TRAVEL: Railways, river navigation and motor.
7. CLIMATE: Tropical.
8. FORM OF GOVERNMENT: Republic.
   President and Vice-President: Elected for four years by popular and direct vote. Election goes to Congress of Deputies if there is not a majority vote. Neither can serve for a second successive term.
   Congress of Deputies: Single chamber, one deputy and one alternate elected for each 10,000 inhabitants. Term, 4 years; one-half renewed every 2 years.
   Cabinet: From 3 to 6 Secretaries, at the option of the President; each in charge of two or more of the following departments: Foreign Affairs; Justice, Treasury and Public Credit; War and Navy; Promotion; Public Works; Agriculture; Public Instruction.
9. PRESIDENT: General Vicente Tosta. Term expires 1928.
10. DEPARTMENTS: Atlantida, Bay Islands, Choluteca, Colon, Comayagua, Copan, Cortes, El Paraiso, Gracias, Intibuca, La Paz, Ocotepeque, Olancho, Santa Barbara, San Pedro Sula, Tegucigalpa, Valle, Yoro. Territory of Mosquitia.
11. PRINCIPAL CITIES: Tegucigalpa (Capital), 40,000; Jutigalpa, 18,000; La Esperanza, 11,453; Santa Rosa, 10,574; Comayagua, 10,000.
12. PRINCIPAL PORTS: Puerto Cortes, Tela, Ceiba, Trujillo, Omoa, Roatan, and Amapala on Tigre Island.
13. POPULATION: 773,408 inhabitants, one-tenth the population of the State of Illinois.
14. INHABITANTS: Chiefly Indians with an admixture of Spanish blood.

15. Industries and Manufacture:
Agriculture: Cacao, cotton, sugar cane, coffee, tobacco, corn, bananas, henequin.
Live Stock: Cattle.
Forest Products: Cocoanuts, mahogany.
Mining: Gold, silver, copper, lead, antimony, mercury, oil.

16. Imports and Exports: The United States in 1924 supplied 87.7 per cent. of the imports and took 86 per cent. of the exports.

17. Education: Free and compulsory between the ages of 7 and 15 years. 850 primary schools with an enrollment of 21,800 pupils. 5-year course. Secondary course, 5 years. Normal training provided at the capital, Santa Rosa, and La Esperanza; medicine and engineering at the Central University of Honduras at Tegucigalpa.

18. Religion: Roman Catholic predominates. State guarantees freedom to all creeds and contributes to support of none.

19. Language: Spanish is in general use. English is freely spoken on north coast.

20. Hotels:
Tegucigalpa: Jockey Club, Arguricia, New York, Progreso.
Comayagua: Cabanas.
La Ceiba: Americano, Paris, Cosmopolito, Delmonico, Roma.
Puerto Cortes: Italia, Lefevre, The Palms.

21. Commercial Establishments:

22. Hospitals:
Tegucigalpa: Public Hospital.
Tela: United Fruit Hospital.

23. Medical Schools: Faculty of Medicine, Central University, Tegucigalpa.

24. Principal Points of Interest:
Tegucigalpa: On an interior plateau at an elevation of 3,200 feet. The only capital of Central America without a railway. A fine highway connects San Lorenzo with the capital and roads are being constructed to the northwest and the northeast. Buildings: National palace, the mint, post office, etc.

25. Method of Travel: Railway, motor cars, boat.

26. Coins: Silver basis. The peso, $0.494 U. S., equals 100 centavos, or 8 reales. Fluctuating paper currency also. United States currency much in use.

27. Weights and Measures: Metric system predominates, but U. S. weights and measures also used.

28. Postage: From Honduras to United States, 6 centavos each 20 grams, and each additional unit. From United States to Honduras, 2 cents per ounce.

29. Mail Time: 8 days from New York to Puerto Cortes.

30. Cable Rates: From New York: 40 cents a word, full rate; 20 cents, deferred rate; 10¾ cents, week-end letter.

31. Wireless: Planned for Tegucigalpa.

32. Difference in Time: One hour west of New York.

33. Holidays: January 1, New Year's Day; July 14, Fall of the Bastille; September 15, Independence Day; October 4, Celebration of Francisco Morazán; October 12, Discovery of America; December 25, Christmas. Many feast days of the Roman Catholic religion are observed.
34. Flag: Three horizontal bars: light blue, white, and light blue. In the center of the white bar are five golden stars.
35. Publications: Principal newspapers published at Tegucigalpa and Comayagua, and a monthly review at Amapala.
36. Diplomatic Service: Exchange Minister.
37. Banks:
San Pedro Sula: American Foreign Banking Corporation, Banco Atlantida, Banco de Honduras.
Tegucigalpa: Banco de Honduras, Banco Atlantida.

MEXICO

1. Historical Review: Mexico was discovered by de Cordova in 1517, when the country was under the rule of an Aztec Emperor. Hernando Cortes took possession of the Aztec capital August 13, 1521, and was appointed Governor of New Spain. In 1535 the viceroyalty of New Spain was created, including all of the Spanish possessions in North and Central America, and was successively governed by 62 viceroys. The struggle for independence was begun by a Mexican priest in 1810. The empire created several years later was short-lived; a republic was proclaimed on December 6, 1822. Spain again attempted to gain possession in 1829, but her forces were defeated and the United States recognized the independence of Mexico in the same year. In 1836, Texas declared its independence and was admitted to the Union of the United States of America in 1845. War between the United States and Mexico followed and was concluded by the Treaty of Guadalupe in 1848. In 1862, there was an intervention by France, England, and Spain which resulted in the establishment of the Mexican Empire by Napoleon III, with Maximilian upon the throne. His followers were defeated in 1867, however, and the succession of Mexican presidents continued.
2. Area: 767,168 square miles. Approximately three times as large as Texas.
3. Physical Contour: 1,942 miles long; 762 miles at widest point. Bounded on the north by the United States; on the east by the Gulf of Mexico, the Caribbean Sea, British Honduras, and Guatemala; on the south and west by the Pacific Ocean. Two mountain chains traverse the entire republic. Lies in latitude 14°30′42″ to 32°42′ N.; longitude 86°46′8″ to 117°7′31″ W.
4. Principal Bodies of Water: Many rivers and lakes.
5. Railways: 16,000 miles of railway, principally government owned.

6. Methods of Travel: Railway, navigation.
7. Climate: Greatly diversified owing to the varying altitudes, as well as the country's situation partly in the tropical and partly in the temperate zones.
8. Form of Government: Federal Republic.
   President: Elected by direct vote for a term of four years. The President cannot succeed himself; nor can he resign, or absent himself from the national territory without the approval of Congress. (There is no Vice-President.)
   Senate: 2 senators from each state; direct election for 4 years. At time of election an alternate is also chosen.
   Chamber of Deputies: 1 member to 60,000 inhabitants. Election direct for 4 years. At time of election an alternate is also chosen.
   Permanent Committee: 29 members (14 senators and 15 deputies). This committee, chosen just before adjournment, during the recess of Congress performs many of the functions thereof.
   Cabinet: Members appointed by the president.
9. President: Plutarco Elías Calles. Term expires in 1928.
10. States and Territories:
   States: Aguascalientes, Campeche, Chiapas, Chihuahua, Coahuila, Colima, Durango, Guanajuato, Guerrero, Hidalgo, Jalisco, Mexico, Michoacan, Morelos, Nayarit, Nuevo Leon, Oaxaca, Puebla, Queretaro, San Luis Potosí, Sinaloa, Sonora, Tabasco, Tamaulipas, Tlaxcala, Vera Cruz, Yucatan, Zacatecas.
   Territories: Lower California, Quintana.
   Federal District.
11. Principal Cities: Mexico City (Capital), 900,000; Guadalajara, 170,000; Puebla, 110,000; Monterey, 100,000; San Luis Potosi, 68,000.
12. Principal Ports: Ten major ports on the gulf coast and thirteen on the Pacific.
13. Population: 15,063,207 (estimated). As great as New York State and Texas combined.
14. Inhabitants: Whites, about 20%; Indians 38%; and mestizos.
15. Industries and Manufacture:
   Agriculture: Henequen, coffee, chicle, frijoles chick peas, ixtle, cottonseed, tobacco, sugar, vanilla, corn.
   Minerals: Oil, silver, copper, lead, antimny, zinc, gold.
   Forest Products: Cabinet woods, rubber.
   Live Stock: Cattle, hides, skins, tallow.
16. Imports and Exports: In 1924 the United States supplied 72.5 per cent. of the imports and took 80 per cent. of the exports.
17. Education: Elementary, compulsory by law; 6-year term. 1,044,229 pupils and 25,302 teachers. Schools of law, medicine, agriculture, etc., are found in Mexico City, Guadalajara, Mérida, Morelia, and Monterey. University of Mexico was founded in 1551.

18. Religion: Prevailing religion is Roman Catholic, but according to constitution of 1917, the church is separated from the state.
19. Language: Spanish, although English is frequently spoken.
20. Hotels:
Mexico City: Regis, Geneve, Imperial.
Guadalajara: Albion, Almada.
Puebla: Español, American, Barcelona, Pasaje, Francia.
Vera Cruz: Imperial.
Monterey: Ancira.
21. Commercial Establishments:
22. Hospitals: *Mexico City:* General, Children's, Valdes, Government, Military, Railway Employe's, English, American, Spanish, and French. The Hospital de la Purísima Concepción at Mexico City was founded by Cortes in 1523. The last male descendant of Cortes drew up the statutes for the hospital in 1612.
23. Medical Schools: National University of Mexico School of Medicine, Mexico City; Medical School at Guadalajara, National University of the Southeast School of Medicine, Mérida; State University of Michoacan, Morelia; School of Medicine at Monterey, Oaxaca, Puebla, San Luis Potosí.
24. Principal Points of Interest:
Vera Cruz: One of first Spanish settlements; on Gallega Island, one mile from the mainland, stands the celebrated fortress of San Juan de Ulua, where the forerunner of Cortes, Juan de Grijalva, landed in 1518.
The trip from Vera Cruz to Mexico City is one of the most picturesque in the world. *Otumba:* Scene of one of the fiercest battles of the Conquest of Cortes. *San Juan Teotihuacan:* Pyramids of the sun and moon, counted among the most remarkable pre-Columbian monuments of Mexico.
Mexico City: Probably oldest city in America. Cathedral (corner stone laid in 1573), national palace, library, museum, post office, mint, palace of justice, clubs, theaters, hotels, private mansions, hospitals, schools, palace of Chapultepec.
Zacatecas: Rich in historical incidents and has prehistoric ruins in the neighborhood.
Guanajuato: Center of one of the richest mineral areas in the world. Dolores Hidalgo, the residence of the priest who raised the cry for independence in 1810, is a small town north of Guanajuato.
Queretaro: Where Emperor Maximilian was shot (1867), and where President Carranza promulgated the new constitution (1917).
Colima: Founded 1523.
Campeche: Founded 1517.
Mérida: Originally a settlement of Maya Indians.

Puebla: Cathedral, and many other churches, library, medical school, chamber of commerce, banks, several good hospitals, hotels, and theaters.

Oaxaca City.

Cuernavaca: A famous resort. Buildings: Palace of Cortes, observatory, public library, cathedral, banks; good parks and the Borda Gardens.

25. Street and Motor Cars: In the majority of the larger cities.
26. Coins: Gold exchange basis. Actual value of gold peso is $0.4986 U.S.
27. Weights and Measures: Metric system.
28. Postage: From Mexico to United States: 10 centavos each 20 grams; 10 centavos each additional unit. From United States to Mexico: 2 cents per ounce.
29. Mail Time: 6 days from New York to Mexico City.
30. Telegraph Rates: Telegram, $1.75 ten words; night letter, $1.75 fifty words; day letter, $2.63 fifty words.
31. Wireless: Large station on Island of Labos; others at Mexico City, Tuxpam, Tampico, Vera Cruz, Progreso, Frontera, Mazatlan, Santa Rosalia, La Paz, Queretaro, Monterey, Saltillo, Torreon.
32. Difference in Time: Mexico City one hour and 36 minutes west of New York.
33. Holidays: January 1, New Year's Day; February 5, Anniversary of the Constitution; May 5, Anniversary of the Triumph in 1862; September 16, Anniversary of Independence; November 20, Beginning of Revolution, 1910; December 25, Christmas Day. Most of the feast days of the Roman Catholic Church are observed.
34. Flag: Three vertical panels, dark green, white, and red; coat of arms in center of white panel.
35. Publications: All important newspapers published in Mexico City. Provincial press is unimportant.
36. Diplomatic Service: Exchange Ambassador.
37. Banks: *Mexico City:* Anglo-South American Bank, Ltd., Bank of Montreal, American Foreign Banking Corporation, Irving National Bank, Banco de Londres y Mexico, Banco Nacional de Mexico.

NICARAGUA

1. Historical Review: Gil González de Avila was the first white man to see Nicaragua (1522). Nicarao, the chief of one of the Indian tribes, received the Spaniards with friendliness; other tribes were subdued. Upon the formation of the captaincy-generalcy of Guatemala, Nicaragua was included in that viceroyalty. In 1821, the five provinces of Guatemala, Honduras, Nicaragua, Salvador, and Costa Rica declared themselves independent, but in the following year Nicaragua became a part

of the Empire of Mexico, a relation which continued only until 1823. Thereupon the states comprising the former viceroyalty of Guatemala formed a union, which was known as the Federation of Central America. The union did not prove permanent. Nicaragua established an independent government in 1838. Several attempts have been made to re-establish the Central American Federation, the latest in 1921. At that time Nicaragua and Costa Rica refused to enter the union, but there is a strong sentiment in favor of it in all the five republics.

2. AREA: 49,200 square miles. 12.8 inhabitants per square mile. As large as New York State.
3. PHYSICAL CONTOUR: Bounded on the north by Honduras, on the east by the Caribbean Sea, on the south by Costa Rica, on the west by the Pacific Ocean. Longest coast line 300 miles on Atlantic. Two mountain ranges traverse the country; there are two great fresh-water lakes. Lies in latitude 10°41′ to 15° N.; longitude 83°15′ to 87°40′ W.
4. PRINCIPAL BODIES OF WATER: Nicaragua and Managua Lakes. Principal rivers, the San Juan, Coco or Segovia, Grande or Matagalpa, and the Mico or Bluefields. San Juan River connects Lake Nicaragua with the Atlantic (steamship service is maintained).
5. RAILWAYS: 171 miles, operated by National Railroad of Nicaragua. Pearl Lagoon Railway on Atlantic coast under construction, and other systems are projected.
6. METHOD OF TRAVEL: Railway, river navigation.
7. CLIMATE: Varies from tropical heat of the coast to the pleasant coolness of mountain regions. In the east rain falls the year round; in the west there are two seasons, dry from December to April, and wet from May to November.
8. FORM OF GOVERNMENT: Republic.
   President and Vice-President: Elected by popular vote, 4-year term. A majority vote is required, otherwise the two chambers elect the president (or vice-president) from the two candidates receiving the greatest number of votes in the popular election.
   Chamber of Deputies: One deputy from each department for each 15,000 population; 4-year term.
   Senate: One senator for each two deputies from a department; 6-year term.
   Cabinet: Secretaries of Government and Police, Foreign Relations, Public Instruction, Treasury and Public Credit, War and Marine, Fomento, Justice, and Public Works.
9. PRESIDENT: Señor Carlos Solorzano. Term expires 1929.
10. DEPARTMENTS: Atagalpa, Carazo, Chinandega, Chontales, Estelí, Granada, León, Managua, Masaya, Rivas, Segovia.
11. PRINCIPAL CITIES: León, 38,318; Managua (Capital), 27,839; Granada, 16,773; Masaya, 10,287; Matagalpa, 10,271.
12. PRINCIPAL PORTS: Corinto, Bluefields, San Juan del Norte.
13. POPULATION: 638,119. Twice the population of Arizona in 1920.

14. Inhabitants: Pure Spanish, mixed Spanish and Indians, and on east coast some negroes.
15. Industries and Manufacture:
Agriculture: Corn, coffee, beans, rice, sugar, cacao, bananas, dates, pineapples and citrus fruits, cocoanuts.
Live Stock: Cattle, hogs, sheep, goats.
Forest Products: Mahogany and cedar.
Mining: Gold and silver.
16. Imports and Exports: In 1924, the United States supplied 73 per cent. of the imports and took 57 per cent. of the exports.
17. Education: Primary education, 4-year course, free and obligatory; complementary, 2 years; secondary education, 5-year course. Seven secondary institutes for boys, under private management, but the government exercises a certain supervision over them, furnishes the buildings and equipment, and grants monthly subsidies. The Pedagogic Institute for Men and the Normal School for Girls are maintained by the Federal Government at Managua. There are law schools at Managua and Granada, and schools of law, medicine, etc., at León.
18. Religion: Roman Catholicism prevails.
19. Language: Spanish.
20. Hotels:
Managua: Gran, Italia, America, Estrella, Lupone.
Bluefields: Peterson, Atlantico, Tropical.
León: Metropolitano, Lupóne, Roma.
Granada: Colon, Ascarate, La Alambra.
21. Commercial Establishments: In the principal cities.
22. Hospitals:
Granada: San Juan de Dios.
León: General San Vincente de León, Debayle.
Managua: General, Pacific Railroad.
23. Medical Schools: Faculties of Medicine at León and Granada.
24. Principal Points of Interest:
Managua: President's Palace, National Palace; a number of fine parks.
Granada and *León:* Have many elements of natural and architectural beauty.
Bluefields: The center for a very large banana industry.
25. Street and Motor Cars:
26. Coins: Gold standard. Cordoba equal to $1.00 U. S. Paper currency is issued by the national bank.
27. Weights and Measures: Metric system.
28. Postage: From Nicaragua to United States: 3 centavos each 20 grams; 1 centavo each additional unit. From United States to Nicaragua, 2 cents per ounce.
29. Mail Time: Nine days from New York to Bluefields.
30. Cable Rates: From New York: 40 cents a word, full rate; 20 cents, deferred rate; 10¾ cents, week-end letter.
31. Wireless: Stations at Managua, Granada, San Carlos, San Juan de Norte, Castillo, Bluefields, Cabo, Gracias a Dios.

32. Difference in Time: Approximately one hour west of New York.
33. Holidays: January 1, New Year's Day; July 4, Independence of the United States; July 14, Bastille Day; September 14 and 15, Independence of Central America; October 12, Columbus Day; December 25, Christmas. Most feast days of the Roman Catholic Church are observed.
34. Flag: Three horizontal bars, dark blue, white, and dark blue.
35. Publications: Principal papers published in Managua, Granada, León, and Bluefields.
36. Diplomatic Service: Exchange Minister.
37. Banks:

Managua: Commercial Bank of Spanish America, Ltd., National Bank of Nicaragua, Anglo-Central American Commercial Bank, Ltd.
Bluefields: National Bank of Nicaragua.
León: National Bank of Nicaragua.
Granada: National Bank of Nicaragua.

PANAMA

1. Historical Review: The Caribbean coast of Panama was explored by Columbus in 1502 and the isthmus crossed by Balboa in 1513. The old city of Panama was founded on August 15, 1519, and there the colonial government, established by Emperor Charles V, 1538, was given jurisdiction over Nicaragua and the Spanish Provinces of Cartagena, Peru, Chile, and what is now Argentina. Subsequently the Province of Panama was restricted to its present area. The city of Panama became the port of transshipment of the enormous wealth of gold, silver, and emeralds which were poured into Spain as a result of the spoliation of the Inca temples, and the point from which the imports were distributed among the colonies. It was connected with the Caribbean by a stone-paved highway which was the commercial thoroughfare until 1848. Old Panama was destroyed in 1671 by Sir Henry Morgan, and rebuilt two years later at a point six miles from the old site. In 1821 Panama became a part of the Colombian confederation, which was dissolved in 1831; but Panama remained with New Granada which became the Republic of Colombia. In 1903, Panama declared its separation from Colombia and became an independent Republic.
2. Area: 33,667 square miles. 11 inhabitants to the square mile. About as large as Maine.
3. Physical Contour: 430 miles long. 120 miles at widest point. Bounded on the north by the Caribbean Sea, on the east by Colombia, on the south by the Pacific Ocean, and on the west by Costa Rica. Two mountain chains traverse the territory, inclosing a number of valleys and plains. Lies in latitude 7°15′ and 9°39′ N.; and in longitude 77°15′ and 83°30′ W.

4. Principal Bodies of Water: The Panama Canal. Tuyra River is navigable for 100 miles; the Bayamo, the Cocle, Calebebora, Tarire, and Los Indios Rivers. Gatun Lake.
5. Railways: 257 miles, to be extended.
6. Method of Travel: Railway, rivers, and motor cars.
7. Climate: Varies from tropical heat of the coast lines to refreshing coolness of interior plateaus.
8. Form of Government: Republic.
   President: Elected by popular vote for term of 4 years; may not be re-elected for successive term unless he resigns his office 18 months prior to election. There is no Vice-President. The assembly elects three "designados" every two years, who take the place of the President in his absence, disability, or death.
   National Assembly: 1 chamber with 32 members. Deputies elected by direct popular vote, for 4-year term, 1 deputy for every 10,000 or fraction of 5,000 or more. (Equal number of substitutes elected at same time.)
   Cabinet: Secretaries of Government and Justice; Foreign Relations; Finance and Treasury; Public Instruction; Promotion.
9. President: Dr. Rodolfo Chiari. Term expires in 1928.
10. Provinces: Bocas del Toro, Chiriqui, Cocle, Colon, Darien, Herrera, Los Santos, Panama, Veraguas.
11. Principal Cities: Panama (Capital), 59,458; Colon, 31,203; Penonomé, 15,000; Santiago, 13,200; David, 13,000; Sona, 10,000.
12. Principal Ports: Colon, Bocas del Toro, Balboa.
13. Population: 446,098.
14. Inhabitants: Spanish, Indian, and negroes.
15. Industries and Manufacture:
   Agriculture: Bananas, sugar cane, tobacco, rice, corn.
   Forest Products: Cabinet, dye, and building woods, balata, rubber, tagua nuts, nispero, cocoanuts.
   Live Stock: 50,000 head of cattle (estimated).
   Mining: Manganese, gold, silver, aluminum, lead, copper, coal, asbestos. Coral, sponges, pearls.
   Manufacture: Sugar mills, manufacture of "Panama hats."
16. Imports and Exports The United States in 1924 supplied 65 per cent. of the imports and took 86.8 per cent. of the exports.
17. Education: Primary compulsory between 7 and 15 years. Urban schools, 6-year course; rural, 3 years. 336 primary schools enrolling 35,371 pupils (1922). Secondary school offers 5-year course. Secondary and higher education given by National Institute in Panama City.
18. Religion: Roman Catholic is state religion, but Protestantism has large following in Canal Zone.
19. Language: Spanish. English is understood by majority of commercial men in Panama and Colon.

20. Hotels:
Panama: Tivoli (at Ancon), International, Metropole, Central, Continental, American, France, Europa.
Colon: Washington, Cristobal, Aspinwall, Grand, Imperial.
David: Santiago, Lombardi.
21. Commercial Establishments: Expansive mercantile shops in Colon.
22. Hospitals:
Ancon (Canal Zone)*:* Ancon.
Colon: Colon, Samaritan.
Panama: Santo Tomas, Hospital de Panama, Toboga Island.
23. Medical Schools:
24. Principal Points of Interest:
Panama City: Municipal Building, Government Palace, American Consulate, Variety Theater, French Administration, Bishop's Palace, Panama Lottery, National Theater, Marine Building, Presidencia, Market, Cathedral, many churches, Spanish Benevolent Society, Union Club. Portion of original sea-wall still standing.
Ancon: Ancon Hill is especially noted for the hospital.
Trips: Electric cars are available for trips to Old Panama as well as carriages and automobiles, launches, or horseback; automobile trips on the fine breakwater extending nearly five miles to a group of islands, Naos, Culebra, Flamenco, and Taboga. Golf courses, swimming, and good fishing.
Porto Bello: Beautiful harbor. Immense rock quarry, with one of the largest stone crushers in the world. Across the bay are the finest ruins of the Isthmus: an old custom house, old bridges, the remains of Fort San Jerome, and the old Plaza. Just beyond Porto Bello is the country inhabited by the San Blas Indians.
25. Street and Motor Cars: In Panama City.
26. Coins: Unit is gold balboa, equivalent to $1 United States gold. In silver there are ½, ¼, 1/10 balboas and some small nickel coins. (The half balboa is popularly called a peso, which is translated into English by dollar, and consequently the half balboa is spoken of as a Panama dollar worth 50 cents.) U. S. currency is in extensive circulation.
27. Weights and Measures: Metric system.
28. Postage: From Panama to United States: 2 centesimos (silver) each 20 grams; 2 centesimos each additional unit. From United States to Panama: 2 cents per ounce.
29. Mail Time: 7 days from New York to Panama.
30. Cable Rates: From New York: 30 cents a word, full rate; 15 cents, deferred rate; 7½ cents, week-end letter.
31. Wireless: At Colon.
32. Difference in Time: Twenty minutes west of New York.
33. Holidays: State religion is Roman Catholic, and feast days are scrupulously observed. January 1, New Year's Day; February 15, Constitution of Republic; July 4, American

Independence Day; July 24, Birthday of Simon Bolivar, October 12, Columbus Day; November 3, Anniversary of separation from Colombia; November 28, Independence from Spain; December 25, Christmas Day.

34. Flag: Four rectangles: Upper left, white with a blue star in center; the lower left is blue, the upper right is red; the lower right, white with a red star in its center.
35. Publications: Numerous daily and weekly papers, most of which are printed in English and Spanish.
36. Diplomatic Service: Exchange Minister.
37. Banks:
    Panama City: American Foreign Banking Corporation, International Banking Corporation, Banco Nacional de Panama.
    Cristobal: American Foreign Banking Corporation.
    Colon: International Banking Corporation, Panama Banking Company.

PARAGUAY

1. Historical Review: First discovered by Sebastian Cabot in 1526; founded in 1536. The Republic of Paraguay gained independence from Spanish rule in 1811, and after a short government by two consuls was seized by Don José Gaspar Rodriguez Francia, who ruled until 1840, when joint consuls of the Republic were elected. In 1870, after a war of five years with Brazil, Uruguay, and Argentina (see Argentina), a new constitution was formed.
2. Area: 196,000 square miles. As large as the New England states, New York, Pennsylvania and Virginia. 5.1 inhabitants to the square mile. Of South American countries, larger only than Ecuador and Uruguay.
3. Physical Contour: An inland Republic. Bounded by Bolivia on the north, Brazil on the east, and Argentina on the south and west. Latitude 22° to 27° S.; longitude 54°5′ to 60°30′ W. Low lying region, level and undulating plain.
4. Principal Bodies of Water: Paraguay and Paraná rivers. Ipoa and Ipacarey lakes.
5. Railways: Total mileage, about 274; additional road proposed.
6. Method of Travel: Principally by steamer on the rivers.
7. Climate: Average summer temperature 82° F.; winter 64°. One of the healthiest countries in the world.
8. Form of Government: Republic.
    President: Elected for term of four years, and non-active Vice-President who is president of the senate.
    Senate: Twenty senators, one to every 12,000 inhabitants; elected by the people for six years.
    Chamber of Deputies: Forty, one to every 6,000 inhabitants; elected for four years.

Cabinet: Five Ministers: Interior; Treasury; Justice, Worship and Public Instruction; War and Marine; Foreign Relations.

9. PRESIDENT: Dr. Eligio Ayala, to serve until August 16, 1928.
10. PROVINCES: Twenty electoral districts numbered from one to twenty.
11. PRINCIPAL CITIES: Asuncion (Capital), 82,300; Villarica, 30,000; Villa Concepcion, 25,000.
12. PRINCIPAL PORT: Asuncion.
13. POPULATION: 1,000,000 inhabitants.
14. INHABITANTS: Guarani Indians predominate. Europeans, chiefly of Spanish blood, and negroes make up the balance.
15. INDUSTRIES AND MANUFACTURE:
Agriculture: Yerba maté, sugar, tobacco, oranges, coffee, rice, cotton, and timber.
Cattle Raising.
Mining: Quartz, agate, opals, kaolin, iron, manganese, copper, mercury.
Manufacture: Lace making.
16. IMPORTS AND EXPORTS: In 1924 United States supplied 14 per cent. of the imports, and took 1 per cent. of the exports.
17. EDUCATION: Primary education free and compulsory, course covering six years; secondary course, six years. Colleges at Asuncion, Concepcion, Villarica, Encarnacion, Barrera Grande. Misiones, Pilar. National University of Paraguay, Asuncion.
18. RELIGION: Roman Catholic religion predominates; but other religions are tolerated.
19. LANGUAGE: Spanish.
20. HOTELS:
Asuncion: Cosmos, Paraguay, Hispaño, America, Italia.
Concepcion: Aurora, Central, Frances, San Martin, Victoria.
21. COMMERCIAL ESTABLISHMENTS:
22. HOSPITALS: *Asuncion:* Nacional, Sala de Maternidad, Asistencia Publica, Sanatoria de I. Moreira, Sanatoria de T. Bello.
23. MEDICAL SCHOOLS: School of Medicine, National University, Asuncion.
24. PRINCIPAL POINTS OF INTEREST: *Asuncion:* Government Capitol, Cathedral, Municipal Palace, National Library, Art Museum, Falls of Iguazu.
25. STREET AND MOTOR CARS: In Asuncion and Villarica.
26. COINS: Gold peso, equals $0.965 United States; paper peso, $0.06 United States, used for commercial purposes; also coins of 20, 10, and 5 centavos.
27. WEIGHTS AND MEASURES: Metric system.
28. POSTAGE: From Paraguay to United States: 100 centavos ½ ounce; 50 centavos each additional unit or fraction thereof. From United States to Paraguay: 2 cents per ounce.
29. MAIL TIME: About twenty-two days from New York.
30. CABLE RATES: From New York: 50 cents a word, full rate; 25 cents, deferred rate; 12½ cents, week-end letter.

31. Wireless: Asuncion, Encarnacion, and Concepcion.
32. Difference in Time: 1 hour 9 minutes east of New York.
33. Holidays: January 1, New Year's Day; May 14, 15, Independence Days; August 15, Founding of Asuncion (local at Asuncion); October 12, Columbus Day; November 25, Adoption of Constitution; December 25, Christmas Day; and many Church holidays.
34. Flag: Three horizontal stripes: Dark red, white, and dark blue; coat of arms on white portion, close to staff.
35. Publications:
36. Diplomatic Service: Exchange Minister.
37. Banks (American and British branches): *Asuncion:* London and River Plate Bank, Ltd.; Bank of the Republic; Bank of London and South America.

PERU

1. Historical Review: After the conquest of the Inca Empire by Pizarro in 1533, Lima became the center of the Spanish powers in South America, and it was not until 1821 that the independence of the country from Spain was declared, and finally secured at the Battle of Ayacucho in 1824.
2. Area: 533,916 square miles. Third largest of South American countries, 8.6 inhabitants to the square mile. As large as all states east of the Mississippi River, excepting Illinois, Michigan and Wisconsin. Twice as large as Texas.
3. Physical Contour: Country divided into three sections: Western lowlands, including Pacific ports; plateau lands, western and central Andes, running from 7,500 to 14,000 feet above sea level; eastern slope and lowlands, sparsely populated, covered with tropical forests and lacking in railroad facilities. Latitude 1° to 18° S.; longitude 69° to 81° W.
4. Principal Bodies of Water: Marañon (Amazon) River, with tributaries, Ucayali and Huallaga rivers. Lakes: Titicaca, Chinchay-Cono, and Lauricocha (principal source of the Amazon).
5. Railways: 2,000 miles of railroad in Peru, principally government owned. Other roads in prospect.
6. Method of Travel: Motor, railroad, and river. Practically no overland communication between west coast of Peru and Iquitos, an eastern city.
7. Climate: Although wholly within tropical latitude, climate only mildly tropical on west coast whose temperature the Humboldt Current modifies. There is little or no rainfall on the west coast of Peru. In the interior it is cool the year round. Temperature varies from 81° F. in summer to 60° F. in winter.
8. Form of Government: Republic.
   President: Elected by direct vote for five years and may be re-elected for one additional term.

Vice-Presidents: Two, elected for four years; take place of President only in case of death or incapacity. Elected by direct vote.

Senate: Thirty-five members, elected by direct vote for five years.

Chamber of Deputies: One hundred and ten members, one for every 30,000 inhabitants. Elected by direct vote for five years.

Cabinet: Seven Ministers, holding office at pleasure of President: Government and Police; War; Navy; Foreign Relations; Justice, Worship and Instruction; Treasury and Commerce; and Promotion.

9. PRESIDENT: Señor Augusto B. Leguia. Term expires 1929.

10. DEPARTMENTS: Amazonas, Ancachs, Apurimac, Arequipa, Ayacucho, Cajamarca, Callao, Cuzco, Huancavelica, Huanuco, Ica, Junin, Lambayeque, Libertad, Lima, Loreto, Madre de Dios, Piura, Puna, San Martin, Tacna, Tumbes, Moquegua (Province).

11. PRINCIPAL CITIES: Lima (Capital), 176,467; Arequipa, 58,500; Callao, 52,843; Cuzco, 28,000; Trujillo, 25,000; Iquitos, 20,000; Ayacucho, 20,000.

12. PRINCIPAL PORTS: Callao and Mollendo, with eight others at which steamers call regularly. Iquitos, port on Amazon River (2,300 miles from its mouth) in extreme northeast of Peru, reached by direct passenger and freight steamers from United States and Europe.

13. POPULATION: 4,634,601, almost one half the population of New York State.

14. INHABITANTS: 900,000 white; 1,200,000 mestizos; 2,000,000 Indians; 400,000 miscellaneous. Large and unknown number of absolutely uncivilized Indians.

15. INDUSTRIES AND MANUFACTURE:

Mining, principal industry: Copper, coal, silver, gold, borax, guano (15,000 tons annually), petroleum (now being exploited by American capital), vanadium, tungsten.

Agriculture: Sugar, rice, cotton, rubber.

Manufacture: Cotton, wool, flour, cottonseed, cocaine, paper, sugar, chocolate, lard, cement, straw, Panama hats, breweries.

16. IMPORTS AND EXPORTS: In 1924 United States supplied 39 per cent. of imports and took 35 per cent. of exports.

17. EDUCATION: Elementary education is, by law, compulsory for both sexes. Education free in primary schools, maintained by government. High schools maintained by government in capitals of the departments, the pupils paying a moderate fee. Elementary school course, 5 years; secondary, 5 years; medical school, 7 years.

18. RELIGION: Roman Catholic is religion of the state; but there exists absolute political and religious liberty.

19. LANGUAGE: Spanish.

20. Hotels:
Lima: Maury, Grand, Francia, Inglaterra, Cardinal, Leuro.
Callao: Internacional.
21. Commercial Establishments: Varied and interesting.
22. Hospitals:
Arequipa: Santa Ana, Goyeneche.
Bella Vista: British-American, Arzabispo, Loayza.
Lima: Santa Ana, Vittorio Emanuel, Dos de Mayo, Italian, Guadalupé, Clinica Macedo, Maison de Sante, San Bartolomé, French, Military.
23. Medical School: University of San Marcos, Lima.
24. Principal Points of Interest: Lima:
Streets and Parks: Plaza des Armes, Calle Union (shopping street), Avenue 9th of September, Paseo Colon, Quinta Herren (on which is situated the American Embassy), Botanical Gardens, Zoölogical Gardens.
Buildings, etc.: Monastery of San Francisco, Senate Building, Government Palace, Hall of Congress, Cathedral (containing remains of Pizarro), National Museum, International Club, Colon Theater, Public Market, Bull Ring, San Cristobal Hill, Chorillos (bathing beach), Portales, Exposition Palace, National Library.
Restaurants: Café Conciertos, Marron's Café, Maury Exposicion, Jardin Estrasburgo, Cardinal, Berlin.
La Punta, summer resort; Inca and pre-Inca ruins; Lake Titicaca.
25. Street and Motor Cars: In Callao and Lima.
26. Coins: Gold standard. Libra equals $4.8665 United States. Divided into 10 soles. 1 sol equals $0.48 United States.
27. Weights and Measures: Metric system.
28. Postage: To United States via Panama: 10 centavos ½ ounce; 10 centavos each additional unit or fraction. To United States via San Francisco: 5 centavos ½ ounce; 5 centavos each additional unit or fraction. From United States to Peru: 2 cents per ounce.
29. Mail Time: From New York to Lima, 13 days.
30. Cable Rates: From New York: 60 cents a word, full rate; 35 cents, deferred rate; 22½ cents, week-end letter.
31. Wireless: Iquitos, Lima, Cachendo, Eten, Trujillo, Ilo, Callao, Pisco, Chala, Liticia, Encanto, San Cristobal, Putumayo, Requena, Orellano, Masisca, Puerto Bermudez.
32. Difference in Time: Lima practically same as New York.
33. Holidays: January 1, New Year's Day; July 4, Independence Day; July 28, 29, and 30, Holidays commemorating National Independence; October 12, Discovery of America; December 25, Christmas Day; and Church holidays.
34. Flag: Three vertical stripes, dark red, white, and dark red; coat of arms on white portion.
35. Publications: Daily, weekly, and monthly publications at Lima, and several English publications.

36. Diplomatic Service: Exchange Ambassador.
37. Banks (American and British branches): *Lima:* Mercantile Bank of the Americas; National City Bank of New York; Anglo-South American Bank, Ltd.

SALVADOR

1. Historical Outline: Pedro Alvarado in 1524 invaded this country and in 1525 captured the Indian capital. Salvador became a part of the captain-generalcy of Guatemala, later included in the viceroyalty of Mexico. In 1821 Salvador joined the Central American Federation. When the federation was incorporated into the Mexican Empire, Salvador protested vehemently. Upon the fall of the short-lived empire, Salvador became a state of the Central American Federation, adopted a constitution in 1824, and in 1841 formally withdrew, and declared its independence. Salvador took part in the Central American Peace Conference in 1907, and participated in the "Conference on Central American Affairs" which was held at Washington in 1923.
2. Area: 13,176 square miles. 114 inhabitants per square mile. As large as New Hampshire and Connecticut.
3. Physical Contour: 140 miles long, average width about 60 miles. Bounded on the north and east by Honduras, on the south by the Pacific Ocean, and on the west by Guatemala. Two mountain chains cross the country almost its entire length, sending out numerous spurs and attaining considerable altitudes. Lies in latitude 13°9′ to 14°27′ N.; longitude 87°44′ to 90°8′ W.
4. Principal Bodies of Water: The Lempa, the Paz, and the San Miguel rivers, and Guijar and Ilopangolakes are navigable for small vessels; Lake Coatepeque is a popular resort.
5. Railways: Approximately 250 miles. Other roads under construction.
6. Method of Travel: Railways and river navigation. Good roads.
7. Climate: Varies from tropical heat near the Pacific to a mild temperature in the interior uplands.
8. Form of Government: Republic.
   President and Vice-President: Elected by popular vote for term of 4 years. President may not be re-elected for term immediately following.
   Chamber of Deputies: 42 members; 3 deputies being elected for each department by direct popular vote for 1 year.
   Ministers of State: Foreign Affairs, Public Instruction, and Justice; War and Marine; Interior, Promotion, and Agriculture; Finance, Public Credit, and Charities.
9. President and Vice-President: President: Dr. Alfonso Quinónez Molina. Term expires in 1927. Vice-President: Dr. Pio Romero Bosque.

10. Departments: Ahuachapan, Cabanas, Chalatenango, Cuscatlan, La Libertad, La Paz, La Union, Morazan, San Miguel, San Salvador, Santa Ana, San Vincente, Sonsonate, Usulutan.
11. Principal Cities: San Salvador (Capital), 82,000; Santa Ana, 71,000; San Miguel, 34,000; San Vincente, 31,000; Santa Tecla, 26,000.
12. Principal Ports: La Unión, El Triunfo, La Concordia, La Libertad, Acajutla.
13. Population: 1,527,000.
14. Inhabitants: Aboriginal and mixed races constitute the bulk of the population.
15. Industries and Manufacture:
Agriculture: Coffee, sugar, indigo, rice, tobacco, henequen.
Mining: Gold, silver.
Manufacture: Hammocks, textiles, silks, saddles, shoes, cigars, cigarettes, iron instruments.
Forest Products: Rubber, balsam of Peru.
16. Imports and Exports: United States in 1924 supplied 59.3 per cent. of the imports and took 28.7 per cent. of the exports.
17. Education: Primary, free and compulsory; minimum period, 5 years. Secondary, 5-year course. Normal School and technical training are offered, and the National University of El Salvador has faculties of medicine, chemistry, law, engineering, etc.
18. Religion: Prevailing religion is Roman Catholic; free exercise of all religions is guaranteed.
19. Language: Spanish.
20. Hotels:
San Salvador: Nuevo Mundo, Italia.
Santa Ana: Oriental, La Florida, Colombia.
Ahuachapan: The American.
La Unión: Central.
21. Commercial Establishments:
22. Hospitals:
San Salvador: Rosales.
Santa Ana: General.
23. Medical Schools: National University of El Salvador.
24. Principal Points of Interest:
San Salvador: National palace, presidential palace, the theaters, market, the cathedral, and the hospital. Many pleasant parks and suburban resorts and lakes.
25. Street and Motor Cars:
26. Coins: Gold standard. Unit: Colon, value $0.50. Silver, 50, 12½ (a real), 6¼, 3½, 20, 10 and 5 centavos. Nickel: 3 and 1 centavos. Copper: 3 centavos.
27. Weights and Measures: Metric system.
28. Postage: From Salvador to United States: 10 centavos each 20 grams; 5 centavos each additional unit. From United States to Salvador, 2 cents per ounce.
29. Mail Time: 13 days from New York to La Unión.

30. Cable Rates: From New York: 40 cents a word, full rate; 20 cents, deferred rate; 10¾ cents, week-end letter.
31. Wireless: At La Libertad.
32. Difference in Time: One hour west of New York City.
33. Holidays: January 1, New Year's Day; March 1, Civic holiday; March 15, Independence Day; October 12, Discovery of America; December 25, Christmas Day. The feast days of the Roman Catholic Church are observed.
34. Flag: Three horizontal bars, dark blue, white, and dark blue; coat-of-arms in center of white bar.
35. Publications: Principally in San Salvador and San Miguel.
36. Diplomatic Service: Exchange Minister.
37. Banks:

San Salvador: Commercial Bank of Spanish America, Ltd., Banco Argicola Commercial, Banco Occidental, Banco Salvadoreño.

Santa Ana: Banco de Santa Ana.

URUGUAY

1. Historical Review: Uruguay was formerly a part of the Spanish Vice-Royalty of Río de la Plata, and subsequently a province of Brazil (see Brazil and Argentina). The movement for independence began in 1811, and was effected on August 25, 1825, and recognized by the Treaty of Montevideo. The present constitution of the Republic came into force on March 1, 1918.
2. Area: 72,153 square miles. Smallest of all South American republics. As large as the combined states of New York, Connecticut, Massachusetts, Vermont, and Rhode Island. 17.4 inhabitants per square mile.
3. Physical Contour: Noted for its extent of rolling plains. Small portion mountainous. Bounded by Brazil, Atlantic Ocean, and Argentina. Latitude 30° to 35° S. Longitude 53° to 58° W.
4. Principal Bodies of Water: LaPlata and Uruguay Rivers. Lake Mirim.
5. Railways: 1,647 miles of railroad in operation, only very small proportion owned by the state.
6. Method of Travel: Railroad and river.
7. Climate: Temperate climate with comparatively slight variations. Seasons reverse of United States. Average temperature 62° F. Uruguay is a popular summer resort for Argentines and Brazilians.
8. Form of Government: Similar to United States with slight variations.

President: Elected for four years by direct vote of people, and ineligible for re-election during succeeding eight years. No Vice-President.

National Administrative Council: Nine members elected directly by the people. Three retire every two years.

Senate: Nineteen senators, chosen by electoral college. One senator for each department. Term, six years, one-third retiring every two years.

Representatives: Ninety, elected for three years by popular vote, one to every 12,000 inhabitants.

Cabinet: Seven members: Ministers of Foreign Relations; Interior; War and Marine; Finance; Public Works; Justice and Public Instruction; Industry.

9. PRESIDENT: Señor José Serrato. Term expires March 1, 1927.
10. DEPARTMENTS: Artigas, Canelones, Cerro Largo, Colonia, Durazno, Flores, Florida, Maldonado, Minas, Montevideo, Paysandú, Río Negro, Rivera, Rocha, Salto, San José, Soriano, Tacuarembó, Treinta y Tres.
11. PRINCIPAL CITIES: Montevideo (Capital), 407,249; Salto, 30,000; Paysandú, 24,000; Mercedes, 23,000; San José, 13,000; Melo, 13,000; Rocha, 12,000.
12. PRINCIPAL PORT: Montevideo.
13. POPULATION: 1,662,116.
14. INHABITANTS: Italians predominate; Spanish, Brazilians, Argentines, French, British, Swiss, German, and others.
15. INDUSTRIES AND MANUFACTURE:

Agriculture: Wheat, corn, flax, oats, barley, birdseed, alfalfa, tobacco, fruit, grapes.

Live Stock and meats, principal industry.

Manufacture: Uruguay imports nearly all of her manufactured goods.

Mineral Deposits: Talc, gold, amethysts, agate, quartz, marble, granite, coal, copper, lead, iron ore, manganese.

16. IMPORTS AND EXPORTS: In 1924 United States supplied 24 per cent. of imports and took 6 per cent. of exports.
17. EDUCATION: Preliminary education free and obligatory. Primary school course, 5 to 7 years; secondary, 4 years; medical school, 7 years.
18. RELIGION: State and church separate and there is complete religious liberty. Roman Catholic religion predominates.
19. LANGUAGE: Spanish.
20. HOTELS:

Montevideo: Palace, Gran, Colon, Alhambra, Lanata.

Suburbs of Montevideo: Parque, Pocitos, and Carrasco.

21. COMMERCIAL ESTABLISHMENTS: Many shops of interest to visitors.
22. HOSPITALS:

Montevideo: Maciel, Instituto de Ginecologia, Pereira Rossell, Spanish, Pasteur, British, Children's, Military, Maternity, Italian, Charity.

23. MEDICAL SCHOOLS: Faculty of Medicine, National University, Montevideo.
24. PRINCIPAL POINTS OF INTEREST: Montevideo:

Parks and Streets: Urbano Park, Avenida 18 de Julio, Calle Sarandi, Plaza Independencia, Plaza Cagancha, Plaza

Constitucion, Plaza Libertad, Plaza Zabala, Plaza Treinte y Tres, Plaza de Armes, Plaza Joaquim Suarez, The Prado, Rambla Wilson.

Bathing Beaches: Pocitos, Playa Ramirez, Capurro, Maloin, Carrasco, Floresta, Solis, Atlantida.

Buildings: Solis Theater, Government Palace, Exposition Building, President's Palace, Cathedral, University of Montevideo, Military Hospital, Penitentiary, Old Fort (El Cerro), Museum, Legislative Palace, markets, cemeteries, Zoölogical Garden, Hippodrome, Jockey Club.

25. Street and Motor Cars: To all parts of Montevideo and the suburbs.
26. Coins: Gold standard. Peso Nacional equals $1.03 United States. Silver peso or dollar divided into one-half and one-fifth. $5, $2, and $1, chief currency.
27. Weights and Measures: Metric system.
28. Postage: 5 centesimos ¾ ounce, 3 centesimos each additional unit or fraction thereof. From United States to Uruguay: 2 cents per ounce.
29. Mail Time: To Montevideo direct, 17 days from New York.
30. Cable Rates: From New York: 50 cents a word, full rate; 25 cents, deferred rate; 12½ cents, week-end letter.
31. Wireless: Banco Ingles, Cerrito, and Isla de Lobos, Rivera, Paso de los Toros, English Bank.
32. Difference in Time: Montevideo 1 hour 15 minutes east of New York.
33. Holidays: January 1, New Year's Day; February 3, Battle of Monte Caseros; February 28, Proclamation of Independence; May 1, Labor Day; May 18, Battle of Las Piedras; May 25, Independence of the Plate River Province; July 4, American Independence Day; July 14, Fall of the Bastille; July 18, Constitution Day; August 25, Independence of Uruguay; September 20, Italian Liberty Day; October 12, Discovery of America; December 25, Christmas Day. April 18, 19, and 20 (every four years coincident with leap year) in memory of Uruguayan patriots. Church holidays also observed.
34. Flag: Five white and four dark blue alternating horizontal stripes. Small white ground in upper left-hand corner containing the sun with rays.
35. Publications: Several in English. Many daily, weekly, and monthly in Spanish.
36. Diplomatic Service: Exchange Minister.
37. Banks (American and British branches): *Montevideo:* National City Bank of New York; Royal Bank of Canada; Anglo-South American Bank, Ltd.

VENEZUELA

1. Historical Review: Venezuela is in the portion of South America discovered by Columbus on his third voyage in 1498.

It was originally a Spanish colony, revolted in 1810, and declared its independence in 1819, under the leadership of Simon Bolivar, the Liberator. In 1845 Spain recognized the independence of the state. It was originally a part of the Greater Republic of Colombia; but in 1830 declared its absolute independence of these states. The present constitution was formed in 1922.

2. Area: 393,976 square miles. 7.6 inhabitants to the square mile. One of the most sparsely settled of all South American countries. As large as New England and the Atlantic Coast states combined. One and one-half times as large as Texas. Sixth largest South American country.
3. Physical Contour: Northernmost part of South American continent. Bounded on north by Caribbean Sea, on east by British Guiana and Brazil, on south by Brazil, on west by Colombia. Divided into four regions, extensive plains and river valleys, by three mountain ranges. Latitude 2°5′ to 12° N.; longitude 60° to 73°5′ W.
4. Principal Bodies of Water: Rivers: Orinoco, Aroa, Tocuya, and Zulia (70 navigable rivers in Venezuela, with a total length of over 6,000 miles). Lakes: Maracaibo and Valencia.
5. Railways: Total mileage, 645; 13 different roads.
6. Method of Travel: Splendid motor roads. In remote districts traffic is carried on on mule back or in carts. In the river districts, in boats.
7. Climate: Tropical, except in the mountain sections. Tropical heat at coast modified by trade winds which lower temperature at night. Generally healthy, although entirely within the tropics. Mean temperature at Caracas only 62° F.
8. Form of Government: Similar to United States.
   President: Elected by the National Congress for seven years, with no restriction as to re-election.
   Senate: Forty members elected by legislative assemblies of the states for 3 years, two for each state.
   Chamber of Deputies: Each state chooses one deputy for every 35,000 inhabitants; term, 3 years.
   Ministers: Foreign Relations, Finance and Public Credit, War and Marine, Interior, Public Instruction, Promotion, and Public Works.
9. President and Vice-President: President, General Juan Vincente Gómez, to serve until May 3, 1929. Vice-President, General José Vincente Gómez.
10. States and Territories:
   States: Anzoátegui, Apure, Aragua, Bolivar, Carabobo, Cojedes, Falçon, Guárico, Lara, Mérida, Miranda, Monagas, Nueva Esparta, Portuguesa, Sucre, Táchira, Trujillo, Yaracuy, Zamora, Zulia.
   Territories: Amazonas, Delta Amacuro.
   Federal District: Caracas.
11. Principal Cities: Caracas (Capital), 92,212; Maracaibo,

46,706; Valencia, 29,466; Barquisimeto, 23,943; San Cristobal, 21,385; Puerto Cabello, 13,176.

12. Principal Ports: La Guaira, Maracaibo, Puerto Cabello. Venezuela has 50 bays and 32 ports.
13. Population: 3,000,000.
14. Inhabitants: Few pure whites, but large percentage of population mestizos.
15. Industries and Manufacture: *Live Stock.*
    Agriculture: Coffee, cacao, sugar, tobacco, cotton, wheat and other cereals.
    Minerals: Petroleum, asphalt, gold, coal, copper and iron.
    Forest Products: Rubber, hardwood, vanilla, Tonka bean.
16. Imports and Exports: In 1924 United States supplied 54 per cent. of imports, and took 27 per cent. of exports.
17. Education: Elementary education free and compulsory in public and private schools. 6 year course. Secondary education also free, 4-year course. Physical instruction obligatory up to 21 years of age.
18. Religion: Roman Catholic predominates, but others are tolerated.
19. Language: Spanish.
20. Hotels:
    Caracas: Alemania, America, Continental.
    Maracaibo: Los Andes, Zulia, Americano Lago, Bismarck.
    Valencia: Lourdes, Ottolina, Olivares.
    La Guaira: Alemania, Neptuna, Español, Familia.
21. Commercial Establishments:
22. Hospitals:
    Caracas: Vargas, Surgical Clinic, General Calixto Garcia, Casa Nacional de Beneficencia.
    Maracaibo: Beneficencia.
23. Medical Schools: Faculty of Medicine, in the Central University, Caracas, and also University of the Andes, Mérida.
24. Principal Points of Interest:
    Caracas: Municipal Theater, Washington Monument in Washington Plaza, Calvario Hill, Bolivar Statue in Bolivar Plaza, Treasury Building, National University, Congreso, President's Palace, National Opera House, Cathedral, Pantheon, Bolivar Museum, Academy of Fine Arts, Public Market, Capitol, Library.
    Paraiso: A suburb of Caracas.
25. Street and Motor Cars: Electric street railways in operation in capital and a number of the larger cities.
26. Coins: Bolivar (100 centavos) equals $0.193 United States. Gold: 100, 25, 10 Bolivars. Silver: 5, 2½, 2, 1 Bolivars. 50 and 25 centimos.
27. Weights and Measures: Metric system.
28. Postage: To United States: 50 centimos for ¾ ounce, 25 centimos each additional unit or fraction thereof. From United States: 5 cents first ounce, 3 cents each additional ounce.

29. Mail Time: 10 days from New York to Maracaibo.
30. Cable Rates: From New York, 60 cents a word, full rate; 42 cents, deferred rate.
31. Wireless: La Guaira, Puerto Cabello, Maracay, Maracaibo, Caracas, San Cristobal, Ciudad, Bolivar.
32. Difference in Time: 32 minutes east of New York.
33. Holidays: January 1, New Year's Day; April 19, First Movement for Independence; June 24, Battle of Carabobo; July 5, Independence Day; July 24, Bolivar Day; December 19, National Holiday; December 25, Christmas. Church holidays are also observed.
34. Flag: Three horizontal stripes, yellow, dark blue, and red. Seven small white stars form a circle in center of blue stripe.
35. Publications: Many daily, bi-weekly and weekly publications.
36. Diplomatic Service: Exchange Minister.
37. Banks (American and British branches):
    Caracas: Mercantile Bank of the Americas; National City Bank of New York; Royal Bank of Canada; Commercial Bank of Spanish America.
    Maracaibo: Mercantile Bank of the Americas; Royal Bank of Canada; National City Bank of New York.

PART V

VOCABULARY

English—Spanish

English—Portuguese

VOCABULARY

Cardinal Numbers

	SPANISH	PORTUGUESE
0	cero *say-roh*	zero *zeh-roh*
1	uno, un, una *oo'-noh, oon, oo'-nah*	um *oong*
2	dos *dohs*	dois *do'ish*
3	tres *trayss*	tres *traish*
4	cuatro *kwah-troh*	quatro *kwah-troo*
5	cinco *sin-koh*	cinco *singk-oo*
6	seis *say-is*	seis *say-ish*
7	siete *see-ay-tay*	sete *sett*
8	ocho *oh-choh*	oito *oy-it-oo*
9	nueve *noo' ay-vay*	nove *nov*
10	diez *dee-ais*	dez *daysh*
11	once *ohn-say*	onze *ongz*
12	doce *doh-say*	doze *doz*
13	trece *tray-say*	treze *trayz*
14	catorce *kah-tor-say*	quatorze *kwer-torz*
15	quince *keen-say*	quinze *kingz*
16	diez y seis *dee-ais ee say-is*	dez a seis *de-ze-say-ish*

	SPANISH	PORTUGUESE
17	diez y siete *dee-ais ee see-ay-tay*	des a sete *de-ze-sette*
18	diez y ocho *dee-ais ee oh-choh*	dezaoito *de-zoy-it-oo*
19	diez y nueve *dee-ais ee noo-ay-vay*	dez a nove *de-ze-nov*
20	veinte *vay'in-tay*	vinte *vingt*
21	veinte y uno *vay'in-tay ee oo'noh*	vinte e um *vingt-ee-oong*
22	veinte y dos *vay'in-tay ee dohs*	vinte e dois *vingt-ee-do-ish*
30	treinta *tray'in-tah*	trinta *treen-tah*
31	treinta y uno *tray'in-tah ee oo'noh*	trinta e um *treen-tah-ee-oong*
40	cuarenta *kwah-rehn-tah*	quarenta *coo-ahr-ain-tah*
50	cincuenta *sin-kwehn-tah*	cincoenta *seen-coo-ain-tah*
60	sesenta *say-sehn-tah*	sessenta *sais-sain-tah*
70	setenta *say-ten-tah*	setenta *sait-ain-tah*
80	ochenta *oh-chen-tah*	oitenta *oy-tain-tah*
90	noventa *noh-vehn-tah*	noventa *no-vain-tah*
100	ciento, cien *see-ehn-toh see'en*	cem *sahm*
101	ciento, uno *see-ehn-toh, oo'noh*	cento e um *sen-toh-ee-oong*
200	doscientos,-as *dohs-see-ehn-tohs tahs*	duzentos *doo-zen-tos*
300	trescientos,-as *trays-see-ehn-tohs tahs*	trezentos *tray-zen-tos*
400	cuatrocientos,-as *kwah-troh-see-ehn-tohs tahs*	quatrocentos *kwa-tro-sen-tos*
500	quinientos,-as *kee-nee-ehn-tohs tahs*	quinhentos *kee-nee-ain-tos*
600	seiscientos,-as *say-is-see-ehn-tohs tahs*	seiscentos *say-ish-sen-tos*
700	setecientos,-as *say-tay-see-ehn-tohs tahs*	setecentos *set-sen-tos*

	SPANISH	PORTUGUESE
800	ochocientos,-as *oh-choh-see-ehn-tohs tahs*	oitocentos *oy-too-sen-tos*
900	novecientos,-as *noh-vay-see-ehn-tohs tahs*	novecentos *nov-sen-tos*
1,000	mil *meel*	mil *meel*
2,000	dos mil *dohs meel*	dois mil *do-ish meel*
1,000,000	millón *mil-yohn*	milhão *mee-lee-ah-ohn*

Days of the Week

Sunday	Domingo *doh-min-goh*	Domingo *doo-meen-goh*
Monday	Lunes *loo-ness*	Segunda-Feira *se-goon-dah fay-rah*
Tuesday	Martes *mahr-tess*	Terca-Feira *ter-sah fay-rah*
Wednesday	Miércoles *mee-air-koh-lays*	Quarta-Feira *kwar-tah fay-rah*
Thursday	Jueves *hoo' ay-vess*	Quinta-Feira *keen-tah fay-rah*
Friday	Viernes *vee-air-ness*	Sexta-Feira *sehs-tah fay-rah*
Saturday	Sábado *sah'bah-doh*	Sabbado *sah-bah-doh*

The Months

January	Enero *ay-nay-roh*	Janeiro *jeh-nay-roh*
February	Febrero *fay-bray-roh*	Fevereiro *fay-vay-ray-roh*
March	Marzo *mahr-soh*	Março *mahr-soh*
April	Abril *ah-breel*	Abril *ah-breel*
May	Mayo *mah-yoh*	Maio *my-oh*
June	Junio *hoo-nee-oh*	Junho *joo-nyoh*
July	Julio *hoo-lee-oh*	Julho *joo-lyoh*
August	Agosto *ah-gohs-toh*	Agosto *ah-gohs-toh*

	SPANISH	PORTUGUESE
September	Septiembre *sep-tee'em-bray*	Setembro *set-tem-broh*
October	Octubre *ock-too-bray*	Outubro *oh-too-broh*
November	Noviembre *noh-vee'em-bray*	Novembro *noh-vem-broh*
December	Diciembre *dee-see'em-bray*	Dezembro *day-zem-broh*

The Seasons

Spring	Primavera *pree-mah-vay-rah*	Primavera *pree-mah-vay-rah*
Summer	Verano *vay-rah-noh*	Verão *ver-ah-ohn*
Autumn	Otoño *oh-toh-n'yoh*	Outomno *oh-toh-noh*
Winter	Invierno *in-vee-air-noh*	Inverno *een-vehr-noh*

Wearing Apparel—general

Ladies or Gentlemen

Boots	botas *boh-tahs*	botas *boh-tahs*
Collar (s)	cuello (s) *kway-l-'yoh*	collarinho (s) *koh-lah-reen-yoh*
Gloves, pair (s)	guantes, par (es) *goo-ahn-tays, pahr*	luvas, par (es) *loo-vahs, pahr*
Handkerchiefs	panuelos *pah-noo'ay-lohs*	lenços *lehn-sohs*
Hat	sombrero *som-bray-roh*	chapéu *shah-pay-oh*
Nightshirt (s) Nightdress (es)	camisa (s) de dormir *kah-mee-sah day dor-meer*	camisa (s) de dormir *kah-mee-sah day dohr-meer*
Overcoat	abrigo *ah-bree-goh*	sobretudo *soh-bray-too-doh*
Shoes	zapatos *sah-pah-tohs*	botinas *boh-teen-nahs*
Slippers	zapatillas *sah-pah-teel-l'yahs*	chinelos *shee-nay-lohs*
Tie	corbata *kor-bah-tah*	gravata *grah-vah-tah*
Umbrella	paraguas *pah-rah-gwahs*	guarda-chuva *guahr-dah-shoo-vah*

	SPANISH	PORTUGUESE
Gentlemen		
Coat (s)	chaqueta (s) *chah-kay-tah*	paletó *pah-lay-toh*
Drawers	calzoncillos *kahl-son-see-l'yohs*	ceroulas *sayr-roh-lahs*
Pajamas	traje de dormir *trah-hay day dor-meer*	pajamas *pah-jah-mahs*
Shirt (s)	camisa (s) *kah-mee-sah*	camisa (s) *kah-mee-sah*
Socks (pairs)	calcetines par (es) *kahl-say-tee-nays pahr*	meias par (es) *my-ahs pahr*
Spats	polainas *poh-ly-nahs*	polainas *poh-lye-nahs*
Suspenders	tirantes *tee-rahn-tays*	suspensorios *soos-pain-soh-ree-ohs*
Trousers	pantalones *pahn-tah-loh-nays*	calças *kahl-sahs*
Waistcoat (s)	chaleco (s) *chah-lay-koh*	collete (s) *kohl-lay-tay*
Ladies and Children		
Apron (s) Pinafore (s)	delantal (es) *day-lahn-tahl*	avental *ah-vain-tahl*
Bib (s)	babero (s) *bah-bay-roh*	babadouro *bah-bah-doh-roh*
Blouse Shirt Waist	blusa (s) *bloo-sah*	blusa *bloo-sah*
Camisole (s)	camisola (s) *kah-mee-soh-lah*	camisola *kah-mee-soh-lah*
Cap (s)	gorra (s) *gohr-rah*	boné *boh-nay*
Chemise (s)	camisa (s) *kah-mee-sah*	camisa *kah-mee-sah*
Combinations	combinaciones *kom-bee-nah-see-oh-nays*	combinação *kohm-bee-nah-sah-oh*
Corset-cover (s)	corpiño (s) *kor-pee-n'yoh*	esper tilho *ehs-pehr teel-yoh*
Drawers	calzones *kahl-soh-nays*	ceroulas *sayr-roh-lahs*
Dress (es)	traje (s) *trah-hay*	vestido *ves-tee-doh*
Scarf (ves)	tapaboca (s) *tah-pah-boh-kah*	faxa *fah-shah*
Shawl (s)	pañoleta (s) *pah-n'yoh-lay-tah*	chalé *shah-leh*

	SPANISH	PORTUGUESE
Skirt (s)	saya (s) *sah-yah*	saia *sah-ee-ah*
Stockings, pair(s)	medias, per (es) *may-dee-ahs pahr*	meias *may-ahs*

Miscellaneous Words

After	después *dess-poo-ess*	depois *day-poh-ays*
Also	tambien *tahm-bee-ehn*	tamben *tahm-by-ay*
Always	siempre *see-em-pray*	sempre *sehm-pray*
Another	otro *oh-troh*	outro *oh-troh*
Bad	malo *mah-loh*	máo *mah-oh*
Bank	banco *bahn-koh*	banco *bahn-koh*
Before	antes *ahn-tays*	antes *ahn-tays*
Black	negro *nay-groh*	negro *nay-groh*
Blanket	frazada *frah-sah-dah*	coberta *koh-bair-tah*
Boat	bote *boh-tay*	bote *boh-tay*
Brush	cepillo *say-peel-yoh*	escova *esh-koh-vah*
Cab	coche *koh-chay*	carruagem *kah-roo-ah-jaim*
Cab-driver	cochero *koh-chay-roh*	cocheiro *koh-shay-roh*
Camera	camára *kah-mah-rah*	camara *kah-mah-rah*
Camp	campo *kahm-poh*	campo *kahm-poh*
Cheap	barato *bah-rah-toh*	barato *bah-rah-toh*
Church	iglesia *ee-glay-see-ah*	igreja *ee-gray-jah*
Cigar	cigarro *see-gahr-roh*	cheruto *sher-roo-toh*
Cigarette	cigarillo *see-gahr-reel-yoh*	cigarro *see-gar-roh*

	SPANISH	PORTUGUESE
Closed	cerrado *ser-rah-doh*	fechado *fay-shah-doh*
Cold	frio *free-oh*	frio *free-oh*
Counterpane	cubre cama *koo-bray kah-mah*	coberta *koh-bair-tah*
Curtains	cortinas *kohr-tee-nahs*	cortinas *kohr-tee-nahs*
Cushion	cojin *koh-heen*	almofada *ahl-moh-fah-dah*
Dear	querida *kay-ree-dah*	querida *ker-ree-dah*
Dirty	sucio *soo-see-oh*	sujo *soo-joh*
Dust	polvo *pohl-voh*	pó *paw*
Enough	bastante *bahs-tahn-tay*	bastante *bahs-tahn-tay*
Envelopes	sobres *soh-brays*	envelopes *ehn-vail-loh-pays*
Evening	anochecer *ah-noh-chay-sair*	á noite *ah-noh-ee-tay*
Everywhere	en todas partes *ehn toh-dahs pahr-tays*	em toda a parte *ehm toh-dah ah pahr-tay*
Farm	granja *grahn-hah*	quintal *keen-tahl*
Films	peliculas *pay-lee-koo-lahs*	fitas *fee-tahs*
Fish	pescado *pess-kah-doh*	peixe *pay-ee-shay*
Flowers	flores *floh-rays*	flors *floh-rays*
Forest	bosque *boss-kay*	bosque *bohs-kay*
Foxes	zorros *soh-rohs*	raposas *rah-poh-sahs*
Frost	escarcha *ess-kahr-chah*	geada *jay-ah-dah*
Frozen	helado *ay-lah-doh*	gelado *jel-lah-doh*
Fur	piel *pee-ell*	pelles *pay-lays*
Goats	cabras *kah-brahs*	cabras *kah-brahs*

	SPANISH	PORTUGUESE
Good	bueno *boo'ay-noh*	bom *bohm*
Hill	colina *koh-lee-nah*	colina *koh-lee-nah*
Horse	caballo *kah-bahl-yoh*	cavallo *kah-vah-loh*
Hot	caliente *kah-lee-ehn-tay*	quente *ken-tay*
House	casa *kah-sah*	casa *kah-sah*
Ice	hielo *ee'ay-loh*	gelo *jay-loh*
Ink	tinta *tin-tah*	tinta *teen-tah*
Kiss	beso *bay-soh*	beijo *bay-joh*
Knife (pen)	corta- pluma *kohr-tah ploo-mah*	canivete *kah-nee-veh-tay*
Lake	lago *lah-goh*	lago *lah-goh*
Lavatory	lavatorio *lah-vah-toh-ree-oh*	lavatorio *lah-vah-tor-ree-oh*
Light (electric)	luz-eléctrica *loos ay-leck-tree-kah*	luz electrica *looz ee-lek-tree-kah*
Long	largo *lahr-goh*	comprido *kohm-pree-doh*
Matches	fosforos *fohs-foh-rohs*	phosphoros *fohs-fohr-rohs*
Mirror	espejo *ess-pay-hoh*	espelho *ehs-pail-yoh*
Moon	luna *loo'nah*	lua *loo-ah*
Moonlight	luz de la luna *loos day lah loo'nah*	luar *loo-ahr*
More	más *mahs*	mais *may-ish*
Mountain	montaña *mon-tah-n'yah*	montanha *mohn-tahn-yah*
Museum	museo *moo-say-oh*	museo *moo-say-oh*
Needle	aguja *ah-goo-hah*	agulha *ah-gool-yah*
Never	nunca *noon-kah*	nunca *noon-kah*

	SPANISH	PORTUGUESE
Night	noche *noh-chay*	noite *noh-ee-tay*
No	no *noh*	não *nahoon*
Nothing	nada *nah-dah*	nada *nah-dah*
Now	ahora *ah-oh-rah*	agora *ah-go-rah*
Nurse	enfermera *ehn-fer-may-rah*	enfermeira *en-fair-may-rah*
Open	abierto *ah-bee-air-toh*	aberto *ah-behr-toh*
Paper (letter)	papel de escribir *pah-pell day ess-kree beer*	papel para cartas *pah-pehl pah-rah kahr tahs*
Pen	pluma *ploo-mah*	caneta *kah-nay-tah*
Pencil	lápiz *lah-pees*	iapis *lah-peez*
Photograph	fotografia *foh-toh-graf-fee-ah*	photographia *foh-toh-grah-fee-ah*
Picture	cuadro *kwah-droh*	quadro *kwah-droh*
Pillow-case	funda *foon-dah*	fronha *frohn-yah*
Pin	alfiler *ahl-fee-lair*	alfinete *ahl-fee-nay-tay*
Pipe	pipa (para fumar) *pee-pah* (*pah-rah foo-mahr*)	cachimbo *kah-shcem-boh*
Police	policia *poh-lee-see-ah*	policia *poh-lee-see-ah*
Police Station	estacion de policia *ess-tah-see-ohn day poh-lee-see-ah*	estacão da policia *ehs-tah-sah-ohn dah poh-lee-see-ah*
Postcards	tarjetas postales *tahr-hay-tahs pohs-tah-lays*	bilhetes postaes *beel-yay-tehs pohs-tah-yehs*

	SPANISH	PORTUGUESE
Post-office	oficina *oh-fee-see-nah* de correo *day koh-ray-oh*	correio *kohr-ray-yoh*
Quick	rápido *rah-pee-doh*	rapido *rah-pee-doh*
Railway Station	estacion de *ess-tah-see-ohn day* ferro-carriles *fay-roh-kah-reel-lays*	estacão da *ehs-tah-sah-ohn dah* estrada de ferro *ehs-trah-dah day fay-roh*
Rain	Lluvia *l'yoo-vee'ah*	chuva *shoo-vah*
River	rio *ree'-oh*	rio *ree-oh*
Rope	cuerda *kwer-dah*	corda *kohr-dah*
Sheets	sábanas *sah-bah-nahs*	lençoes *lehn-soh-ish*
Short	corto *kor-toh*	curto *koor-toh*
Silk	seda *say-dah*	seda *say-dah*
Snow	nieve *nee'ay-vay*	neve *nay-vay*
Soap	jabón *hah-bun*	sabão *sah-bah-ohn*
Soon	pronto *pron-toh*	cedo *say-doh*
Stamps	sellos *say-l'yohs*	sêllo *say-loh*
Steamer	vapor *vah-pohr*	vapor *vah-pohr*
Strap	correa *koh-ray-ah*	correa *kohr-ray-ah*
String	cuerda *koo-air-dah*	cordel *kohr-dell*
Table-cloth	mantel *mahn-tell*	toalha da mesa *toh-ahl-yah dah may-sah*
That	ese *ess-say*	esse *es-say*
There	allá *ah-l'yah*	acolá *ah-koh-lah*
These —Those	estos—aquellos *ess-tohs ah-kell-l'yohs*	estos—aquellos *es-tohs ah-kay-lohs*

	SPANISH	PORTUGUESE
Thimble	dedal *day-dahl*	dedal *day-dahl*
This	esto *ess-toh*	isto *ees-toh*
Thread	hilo *ee-loh*	linha *leen-yah*
Tobacco	tabaco *tah-bah-koh*	fumo *foo-moh*
Today	hoy *oh'-ee*	hoje *oh-jay*
Tomorrow	mañana *mah-n'yah-nah*	amanhã *ah-mahn-yah*
Too much	demasiado *day-mah-see-ah-doh*	demasiado *day-mah-see-ah-doh*
Tonight	esta noche *ess-tah noh-chay*	esta noite *es-tah noh-ee-tay*
Towel	toalla *toh-ahl-l'yah*	toalha *toh-ahl-yah*
Tower	torre *toh-ray*	torre *tor-ray*
Train	tren *trehn*	trem *tryim*
Tram	tranvía *trahn-vee-ah*	bonde *bohn-day*
Tree	arbol *ahr-bol*	arvore *ahr-voh-ray*
Umbrella	parāguas *pah-rah-gwahs*	guarda-chuva *guar-dah shoo-vah*
Under	debajo *day-bah-hoh*	debaixo *day-bah-ee-shoh*
Very	muy *moo'ee*	muito *moo-ee-toh*
Waiter	mozo *moh-soh*	garçon *gahr-sohn*
Water	agua *ah-gwah*	agua *ah-gwah*
Waterfall	cascada *kahs-kah-dah*	queda de agua *kay-dah day ah-gwah*
Weather—good	buen tiempo *boo'en tee-ehm-poh*	bom tempo *bohn tayn-poh*
Weather—bad	mal tiempo *mahl tee-ehm-poh*	máo tempo *mahoh tayn-poh*
When	cuando *kwahn-doh*	quando *kwan-doh*

	SPANISH	PORTUGUESE
Where	donde *don-day*	onde *ohn-day*
White	blanco *blahn-koh*	branco *brahn-koh*
Why	porque *por-kay*	porque *pohr-kay*
With	con *kon*	com *kohn*
Without	sin *sin*	sem *sayn*
Yacht	yate *yah-tay*	hiate *ee-ah-tay*
Yes	sí *see*	sim *seen*
Yesterday	ayer *ah-yair*	hontem *ohn-tayn*

For Use in a Restaurant

(English—Spanish)

I want a table for —— persons.
Deseo una mesa para —— personas.
day-say-oh oo-nah may-sah pah-rah —— pehr-sohn-nahs

Give me the bill of fare.
Déme el menú.
day-may ell men'oo

What have you ready?
¿Qué es lo que hay ya listo?
kay ess loh kay ah'ee yah lees-toh

We are in a hurry.
Tenemos prisa.
tay-nay-mohs pree-sah

No more, thank you.
Gracias, no deseo más.
grah-see-ahs, noh day-say-oh mahs

Bring me the bill.
Traigame la cuenta.
try-gah-may lah kwen-tah

This is not correct.
Esto no esta bien.
ess-toh noh ess-tah bee-ehn.

For Use in a Restaurant

(English—Portuguese)

I want a table for —— persons.
Desejo uma meza para —— pessoas.
day-say-joh oo-mah may-sah pah-rah —— pay-soh-ers

Give me the bill of fare.
Traga-me o menu.
trah-gah may oo may-noo

What have you ready?
¿O que tem prompto?
oo kay time prohn-toh

We are in a hurry.
Estamos com muita pressa.
ehs-tah-mohs kohn moo-ee-tah pray-sah

No more, thank you.
Não desejo nada mais, muito obrigado.
nahoh day-say joh nah-dah myees, moo-ee-toh oh-bree-gah-doh

Bring me the bill.
Traga-me a conta.
trah-gah-may ah kohn-tah

This is not correct.
¡Isto não é correcto!
ees-too nah-oh ay kor-ray-toh

	SPANISH	PORTUGUESE
Fish	pescado *pay-skah-doh*	peixe *pay-shah*
Anchovies	anchovas *ahn-choh-vahs*	anchovas *ahn-show-vahs*
Cod	bacalao *bah-kah-lah-oh*	bacalhau *bah-kall-ee-aho*
Crab	cangrejo *kahn-gray-hoh*	caranguejo *kah-rahn-gay-joh*
Haddock	róbalo *roh-bah-loh*	robalo *roh-bah-loh*
Herring	arenque *ah-rehn-kay*	arenque *ahr-ain-kay*
Lobster	langosta *lahn-goss-tah*	lagosta *lah-gos-tah*
Mackerel	macarela *mah-kah-ray-lah*	cavalla *kah-val-lah*
Oysters	ostras *oss-trahs*	ostras *os-traas*
Salmon	salmon *sahl-mohn*	salmão *saal-maa-ohn*
Sole	lenguado *lehn-gwah-doh*	linguado *leen-goo-ah-doh*
Trout	trucha *troo-chah*	truta *troo-tah*
Turtle	tortola *torr-toh-lah*	tartaruga *tahr-tahr-oo-gah*
Fowl	aves *ah-vehs*	aves *ah-vehs*
Chicken	pollo *pohl-yoh*	gallinha *gahl-een-ee-ah*
Duck	pato *pah-toh*	pato *pah-toh*
Game	caza *kah-sah*	caça *kahs-sah*
Goose	ganso *gahn-soh*	ganso *gahn-soh*
Partridge	perdíz *pair-dees*	perdis *pair-dees*
Pheasant	faisán *fye-sahn*	faisão *faa-eeis-ah-on*
Pigeon	paloma *pah-loh-mah*	pombo *pohm-boh*

	SPANISH	PORTUGUESE
Quail	codorniz *koh-dor-neeс*	codorniz *co-dor-neeс*
Turkey	pavo *pah-voh*	peru *peer-oo*
Meats	carnes *kahr nays*	carnes *kahr-ness*
Beef-steak	biftek *bif-teck*	um bife *oom bee-feh*
Corned-beef	cecina *say-see-nah*	carne de conser-va *kahr nay day kon-sayr-vah*
Roast-beef	carne asada *kahr-nay ah-sah-dah*	carne assada *kahr-nay ah-sah-dah*
Chop	chuleta *choo-lay-tah*	costella *coos-tail-lah*
Cutlet	costeleta *koss-tay-lay-tah*	costelleta *coos-tail-lait-tah*
Ham	jamón *hah-mon*	presunto *pray-soon-toh*
Kidney	riñones *ree-n'yoh-nays*	rins *reehns*
Lamb	cordero *korr-day-roh*	cordeiro *koor-day-roh*
Liver	hígado *ee-gah-doh*	figado *fee-gah-doh*
Mutton	carnero *kahr-nay-roh*	carneiro *cahr-nay-roh*
Sausage	salchicha *sahl-chee-chah*	salchichão *sahl chee-shah-ohn*
Tongue	lengua *len-gwah*	lingua *leehn-goo-ah*
Veal	ternera *terr-nay-rah*	vitella *veeh-tail-lah*
Vegetables	verduras *vair-doo-rahs*	legumes *laig-oom-mehs*
Artichokes	alcachofas *ahl-kah-choh-fahss*	alcachofras *ahl-caah-sho-frahs*
Asparagus	esparragos *ess-pah-rah-gohs*	espargos *es-pahr-goos*
Beans	porotos *poh roh-tohs*	feijões *fai-jaah-ons*
Cabbage	repollo *ray-poh-l'yoh*	repolho *ray-poll-yoh*

	SPANISH	PORTUGUESE
Carrots	zanahorias *sah-nah-oh-ree'ahs*	cenouras *say-noh-rahs*
Cauliflower	coliflor *koh-lee-flor*	couveflor *cooh-veh-flohr*
Celery	apio *ah-pee-oh*	aipo *ahee-poh*
Cucumber	pepino *pay-pee-noh*	pepino *pay-pee-noh*
Lettuce	lechuga *lay-choo-gah*	alface *ahl-fahs-seh*
Peas	guisantes *gee-sahn-tays*	ervilhas *air-veel-ee-ahs*
Potatoes	patatas *pah-tah-tahs*	batatas *bah-tah-tahs*
Radishes	rabanos *rah-bah-nohs*	rabanetes *rah-bah-neh-tees*
Spinach	espinaca *ess-pee-nah-kah*	espinafres *ees-pee-nah-frees*
Turnip	nabo *nah-boh*	nabo *nah-boh*
Watercress	berros *ber-rohs*	agrião *ah-gree-ahon*
Eggs	huevos *way-vohs*	ovos *oh-voos*
Boiled	pasados *pah-sah-dos*	cozidos *coo-see-dohs*
Fried	fritos *free-tohs*	estrellados *es-trail-lah-dohs*
Omelette	tortilla *torr-teel-l'yah*	omeleta *oh-mail-ait-tah*
Poached	escalfados *ess-kahl-fah-dohs*	banhomaria *bahn-yoh-mah-ree-ah*
Fruits	frutas *fruh-tahs*	fructas *frooh-tahs*
Apples	manzanas *mahn-sah-nahs*	maçãs *mahs-sahns*
Apricots	albaricoques *ahl-bah-ree-koh-kays*	damascos *dah-mahs-coos*
Banana	banana *bah-nah-nah*	banana *bah-nah-nah*
Cherries	cerezas *say-ray-sahs*	cerejas *say-ray-jahs*
Figs	higos *ee'gohs*	figos *fee-gohs*

	SPANISH	PORTUGUESE
Gooseberries	uvas espinas *oo-vahs ess-pee-nahs*	amora *ah-moh-rah*
Grapes	uvas *oo-vahs*	uvas *oo-vahs*
Lemon	limón *lee-mohn*	limão *lee-mah-ohn*
Melon	melón *may-lohn*	melão *mel-lah-ohn*
Orange	naranja *nah-rahn-hah*	laranje *lahr-ahn-jeh*
Peach	melocotón *may-loh-koh-tohn*	pecego *pes-say-goh*
Pear	pera *pay-rah*	pera *pay-rah*
Pineapple	piña *pee-n'yah*	abacaxi *ah-bah-kah-shee*
Plum	ciruela *see-roo'ay-lah*	ameixa *ah-mais-hah*
Raspberries	frambuesas *frahm-boo'ay-sahs*	framboezas *frahm-bo-ays-ahs*
Strawberries	fresas *fray-sahs*	morango *moh-rahn-goh*
Bread	pan *pahn*	pão *pah-ohn*
Biscuits	bizcochos *bis-koh-chohs*	biscoutos *bis-koo-ee-toos*
Bread—brown	pan negro *pahn nay-groh*	pão negro *pah-ohn naih-groh*
Bread—white	pan blanco *pahn blahn-koh*	pão branco *pah-ohn brahn koh*
Toast	tostada *tohs-tah-dah*	torrada *toh-rah-dah*
Dessert	postre *pohs-tray*	doces *doh-says*
Cake	pastel *pahs-tell*	bolo *boh-loh*
Ice Cream	crema helada *kray-mah ay-lah-dah*	sorvete *sohr-vay-tay*
Pie	torta *tohr-tah*	torta de frutas *tohr-tah day froo-tahs*
Pudding	pudin *poo-din*	pudim *poo-deem*
Sauce	salsa *sahl-sah*	molho *moyl-yoh*

	SPANISH	PORTUGUESE
Tart	torta *tohr-tah*	torta *tohr-tah*
Beverages	bebidas *beh-bee-das*	bebidas *beh-bee-dahs*
Beer	cerveza *sair-vay-sah*	cerveja *sair-vay-jah*
Brandy	cognac *koh-nahck*	aguardente *ah-goo-ahr-dain-tay*
Cider	sidra *see-drah*	cidra *see-drah*
Claret	vino de Burde-os *vee-noh day boor-day-ohs*	claret *klahr-ett*
Cocoa	cocoa *koh-koh-ah*	chocolate *show-koh-lah-tay*
Coffee	café *kah-fay*	café *kah-fay*
Cream	crema *kray-mah*	creme *kray-may*
Gin	ginebra *hee-nay-brah*	genebra *gee-nay-brah*
Ginger-ale	cerveza picante *sair-vay-sah pee-kahn-tay*	refresco de ginja *ray-frays-koh day geen jer*
Lemonade	limonada *lee-moh-nah-dah*	limonada *lee-moh-nah-dah*
Milk	leche *lay-chay*	leite *lay-ee-teh*
Tea	té *tay*	chá *shah*
Water	agua *ah-gwah*	agua *ah-goo-ah*
Whiskey	whiskey *wis-kee*	whiskey *whis-kee*
Wine	vino *vee-noh*	vinho *veen-ee-oh*
Dishes	fuentes *foo-ehn-tays*	louça *loh-sah*
Bottle	botella *boh-tay-l'yah*	garrafa *gah-rah-fah*
Bowl	palangana *pah-lahn-gah-nah*	tigela *ti-jay-lah*

	SPANISH	PORTUGUESE
Cruet	salvilla *sahl-vee-l'yah*	garrafa *gah-rah-fah*
Cup	taza *tah-sah*	chicara *shee-kah-rah*
Decanter	botellón *boh-tay-l'yohn*	garrafa *gah-rah-fah*
Dish	fuente *foo-ehn-tay*	travessa *trah-vay-sah*
Fork	tenedor *ten-nay-dor*	garfo *gahr-foh*
Glass	vaso *vah-soh*	copo *koh-poh*
Jug	jarra *hah-rah*	garra *jah-rah*
Knife	cuchillo *kuh-cheel-l'yoh*	faca *fah-cah*
Ladle	cucharón *koo-chah-ron*	concha *kohn-cha*
Plate	plato *plah-toh*	prato *prah-toh*
Saucer	platillo *plah-teel-l'yoh*	pires *pee-rehs*
Spoon	cuchara *koo-chah-rah*	colher *cool-lee-ayr*
Spoon (tea)	cucharita *koo-chah-ree-tah*	colher de chá *cool-lee-ayr day shah*
Spoon (dessert)	cucharilla *kuh-chah-ree-l'yah*	colher de doce *cool-lee-ayr day doh-say*
Teapot	tetera *tay-tay-rah*	bule *boo-leh*
Wine-glass	copa *koh-pah*	copo *koh-poh*
Miscellaneous	miscelâneo *mees-cell-ah-nay-o*	diversos *dee-vayr-sohs*
Breakfast	desayuno *day-sah-you-noh*	almoço *ahl-mohs-soh*
Dinner	comida *koh-mee-dah*	jantar *jahn-tahr*
Supper	cena *say-nah*	ceia *say-ee-ah*
Lunch	almuerzo *ahl-moo-err-soh*	merenda *mayr-ayn-dah*
Meal	comida *koh-mee-dah*	refeiço *reh-fay-ee-soh*

	SPANISH	PORTUGUESE
Boiled	hervido *err-vee-doh*	cozido *coo-see-doh*
Cold	frio *free-oh*	frio *free-oh*
Fried	fritos *free-tohs*	frita *free-tah*
Grilled	asada *ah-sah-dah*	assado *ah-sah-doh*
Iced	helado *ay-lah-doh*	gelada *jay-lah-dah*
Roast	asado *ah-sah-doh*	assado *ah-sah-doh*
Sweet	dulce *dool-say*	doce *doh-say*
Sour	agrio *ah-gree-oh*	acido *ah-see-doh*
Tough	duro *doo-roh*	duro *doo-roh*
Tender	tierno *tee-air-noh*	tenro *ten-roh*
Rare	poco asada *poh-koh ah-sah-dah*	pouco assado *poh-koh ahs-sah-doh*
Well-done	muy asada *moo-ee ah-sah-dah*	bem assada *beim ahs-sah-dah*
Broth	caldo *kahl-doh*	caldo *kahl-doh*
Butter	mantequilla *mahn-tay-kee-l'yah*	manteiga *mahn-tay-ee-gah*
Cheese	queso *kay-soh*	queijo *kay-joo*
Fat	gordo *gorr-doh*	gordura *gohr-doo-rah*
Lean	sin grasa *sin grah-sah*	magro *mah-groh*
Gravy	salsa *sahl-sah*	môlho *mohl-ee-oh*
Jam	conserva de frutas *kon-sair-vah day froo-tahs*	conserva de frutas *kon-ser-vah day froo-tahs*
Jelly	jalea *hah-tay-ah*	gelea *jail-ay-ah*
Marmalade	marmolada *mahr-moh-lah-dah*	marmelada *mahr-may-lah-dah*

	SPANISH	PORTUGUESE
Mayonnaise	mayonesa *mah-yoh-nay-sah*	mayonnaise *mah-ee-ohn-nayse*
Macaroni	macarrones *mah-kah-roh-nays*	macarrão *mah-cah-rah-oon*
Mustard	mostaza *mohs-tah-sah*	mostarda *moos-tahr-dah*
Nuts	nueces *noo-ay-says*	nozes *no-sees*
Pancake	buñuelo *boo-new-ay-loh*	torta *tohr-tah*
Pepper	pimienta *pee-mee-ehn-tah*	pimenta *pee-main-tah*
Salt	sal *sahl*	sal *sahl*
Sugar	azúcar *ah-soo-kahr*	assucar *ahs-soo-cahr*
Pickles	encurtido *ehn-koor-tee-doh*	escaveche *ehs-kah-bay-shay*
Vinegar	vinagre *vee-nah-gray*	vinagre *vee-nah-gray*
Rice	arroz *ah-rohs*	arroz *ahr-rohs*
Salad	ensalada *ehn-sah-lah-dah*	salada *sah-lah-dah*
Sandwich	sandwich *sahnd-wich*	sandwich *sahnd-weech*
Soup	sopa *soh-pah*	sopa *soh-pah*
Napkin	servilleta *sair-veel-l'ay-tah*	guardanapo *goo-ahr-dah-nah-poh*
Tablecloth	mantel *mahn-tel*	toalha de mesa *too-ahl-eeah day may-*
Waiter	mozo *moh-soh*	garçon [*sa* *gahr-sohn*

Common Expressions
(English—Spanish)

Good morning.
Buenos dias.
boo'ay-nohs dee-ahs

Good afternoon.
Buenos tardes.
boo'ay-nahs tahr-dehs

Good night.
Buenos noches.
boo'ay-nahs noh-chays

Last night.
Anoche.
ah-noh-chay

This evening.
Esta noche.
ess-tah noh-chay

I want.
Yo quiero.
yoh kee-air-oh

Give me.
Deme.
day-may

Bring me.
Tráigame.
try-gah-may

If you please.
Sí a usted gusta.
see ah oo'sted goo-stah

Pardon me.
Perdoneme.
pair-don-nay-may

Thanks very much.
Muchas gracias.
moo-chas grah-see-ahs

Come here.
Venga aquí.
vehn-gah ah-kee

How are you?
¿Como está usted?
koh-moh ess-tah oo'sted

Very well, thanks.
Muy bien gracias.
moo'ee bee'en grah-see-ahs

Wait a moment.
Espere un momento.
ess-pay-ray oon moh-mehn-toh

Common Expressions
(English—Portuguese)

Good morning.
Bôns dias.
bohns dee-ahs

Good afternoon.
Bôas tardes.
bo-ahs tahr-days

Good night.
Boas noites.
bo-ahs noy-tays

Last night.
A noite passada.
ah noy-itay pah-sah-dah

This evening.
Esta noite.
chs-tah noy-itay

I want.
Eu quero.
ayoh kay-roh

Give me.
Dê-me
day-may

Bring me.
Traga-me
trah-gah-may

If you please.
Se faz favor.
say fawish fah-vohr

Pardon me.
Desculpe-me.
des-kul-pay-may

Thanks very much.
Muitissimo obrigado.
moo-eet-issi-moh oh-bree-gah-doh

Come here.
Venha cá.
vain-yah kah

How are you?
¿Como está?
kom-mo es-tah

Very well, thanks.
Muito bem, obrigado.
moo-eet-oh bahin, oh-bree-gah-doh

Wait a moment.
Espere um pouco.
ehs-pay-ray oon poh-koh

At once.—Quickly.
Enseguida — pronto.
ehn-say-gee-dah pron-toh

What do you want?
¿Qué quiere usted?
kay kee-air-ay oo-sted

Listen to me.
Escúcheme.
ess-koo-chay may

What is this?
¿Qué es esto?
kay ess ess-toh

What is the time?
¿Qué hora es?
kay oh-ra ess

Lead the way.
Enseñe el camino.
ehn-say-n'yai el kah-mee-noh

Go away.
Váyase.
vah-yah-say

Give me some more.
Deme más.
day-may mahs

Too much.
Demasiado.
day-mah-see-ah-doh

I do not understand.
No comprendo.
noh kom-prehn-doh

Do you understand?
¿Comprende usted?
kom-prehn-day oo-sted

How much?
¿Cuanto es?
kwahn-toh es

Here it is.
Aqui está.
ah-kee ess-tah

I do not like.
No me gusta.
noh may goos-tah

I must go.
Debo irme.
day-boh eer-may

At once.—Quickly.
Já—Rapidamente.
jah rah-pee-dah-men-tay

What do you want?
¿Oque deseja?
oh-kay day-say-jah

Listen to me.
Escute-me.
ehs-koo-tay may

What is this?
¿O que é isto?
oh kay ay ees-toh

What is the time?
¿Que horas são?
kay oh-rah sahon

Lead the way.
Indique o caminho.
een-dee-kay oo kah-meen-yoh

Go away.
Vá-se embora.
vah-say em-bor-ah

Give me some more.
Dê-me um pouco mais.
day-may oon poh-koh myees.

Too much.
Demasiado.
day-mah-see-ah-doh

I do not understand.
Não comprehendo.
noun kom-pree-en-doh

Do you understand?
¿O senhor comprehende?
oo sain-yor kom-pree-en-day

How much?
¿Quanto é?
kwan-toh ay

Here it is.
Aqui está.
ah-kee es-tah

I do not like.
Não gosto.
noun gohs-toh

I must go.
Devo ir.
day-voo eer

Allow me.
Permitame.
pair-mee-tah-may

Come in.
Entre.
ehn-tray

Don't mention it.
No hay de que.
noh ah-ee day kay

Have a seat.
Siéntese usted.
see-ain-tay-say oo'sted

Don't trouble yourself.
No se moleste.
noh say moh-less-tay

It does not matter.
No importa.
noh im-pohr-tah

Good-bye.
Adios.
ah-dee-ohs

Your health.
A su salud.
ah soo sah-lud

You are very charming.
Usted es muy bonita.
oo-sted ess moo'ee boh-nee-tah

You speak very well.
Usted habla muy bien.
oo-sted ahb-lah moo'ee bee-ehn

In Making a Call

I should like to see you again.
Me gustaria ver a usted otra vez.
may goos-tah-ree'ah vair ah oo'sted oh-trah vais.

I hope to meet you again.
Espero tener el gusto de ver a usted otra vez.
ess-pair-roh tehn-air el goos-toh day vair ah oo'sted oh-trah vais

I am pleased to see you.
Me alegro de ver a usted.
may ahl-lay-groh day vair ah oo'sted

Certainly, with pleasure.
Sí, con mucho gusto.
see kon moo'choh goos-toh.

Allow me.
Permitta-me.
per-mee-tah may

Come in.
Entre.
en-tray

Don't mention it.
Não tem que agradecer.
noun tym kay ah-grah-day-seer

Have a seat.
Sente-se se faz favor.
sen-tay-say say fawish fah-vohr

Don't trouble yourself.
Não se encommode.
noun say ehn-kom-moh-day

It does not matter.
Não importa.
noun eem-por-tah

Good-bye.
Adeus.
ah-day-ohs

Your health.
A sua saude.
ah soo-ah say-oo-day

You are very charming.
A senhora é encantadora.
ah sain-nor-ah ay en-kahn-tah-dor-ah

You speak very well.
O senhor fala muito bem.
oo sain-yor fah-lah moo-ee-toh byem

In Making a Call

I should like to see you again.
Muito prazer teria em ver o senhor novamente.
moo-ee-toh pre-sair-ay-ter ee-ah eym vair oo sain-yor nov-aim en-tay

I hope to meet you again.
Espero que nos encontraremos novamente.
ehs-pair-oh kay nohs en-kon-trah-ray-mos nov-aim-en-tay

I am pleased to see you.
Tenho grande prazer em o ver.
tain-yoh grahn-day pre-sair-ay eym oo vair-ray

Certainly, with pleasure.
¡Certamente, com muito prazer!
sair-tah-men-tay, kohm moo-ee-toh pre-sair-ay

I am fortunate to have met you.
He tenido suerte de haber encontrado a usted.
ay tehn-nee-doh soo-air-tay day ah-bair ehn-kon-trah-doh ah oosted

It is very cold to-day.
Hace mucho frio hoy.
ah-say moo-choh free'oh oh'ee

It is very warm to-day.
Hace mucho calor hoy.
ah-say moo-choh kah-lohr oh'ee

It is a damp, cold day.
Es un día humedo y frio.
ess oon dee'ah oo-may-doh ee free'oh

It is a very sultry day.
Es un dia muy sofocante hoy.
ess oon dee-ah moo'ee soh-foh-kahn-tay oh'ee

This is very beautiful.
Esto es muy hermoso.
ess-toh ess moo'ee air-moh-soh

What is the name of this place?
¿Cómo se llama este lugar?
koh-moh say ll'yah-mah ess-tay loo-gahr

Give me your address.
Déme su dirección.
day-mee soo dee-reck-see'on

When shall I call?
¿Cuando quiere usted que venga?
kwahn-doh kee-air-ay oosted kay vehn-gah

Thanks ever so much for your hospitality.
Muchísimas gracias por su tan amable hospi-
moo-chee-see-mahs grah-see-ahs por soo tahn ah-mah-blay oss-pee-
talidad.
tah-lee-dad

We have enjoyed ourselves very much.
Nos hemos divertido muchísimo.
nohs ay-mohs dee-vair-tee-doh moo-chee-see-moh

At the Railroad Station

When will the train start?
¿Cuando sale el tren?
kwahn-doh sah-lay ell trehn

What time shall we arrive at.....?
¿Ah qué hora llegaremos a.....?
ah kay oh-rah ll'ay-gah-ray-mohs ah.....

I am fortunate to have met you.
¡Que felicidade tel-o encontrado!
kay fel-lee-see-dah-day tay-loh en-kon-trah-doh

It is very cold to-day.
Está muito frio hoje
es-tah moo-ee-toh free-oo oy-jay

It is very warm to-day.
Está muito quente hoje
es-tah moo-ee-toh ken-tay oy-jay

It is a damp, cold day.
Está um dia frio e humido.
es-tah oon dee-ah free-oo ee oom-ee-doh

It is a very sultry day.
Está um dia suffocante.
es-tah oon dee-ah soo-foo-kahn-tay

This is very beautiful.
¡Isto é lindissimo!
ees-too ay leen-dees-see-moh

What is the name of this place?
¿Como se chama este logar?
koh-moh say shah-mah es-tay lo-gahr

Give me your address.
Dê-me o seu endereco.
day-may oo say-oh en-der-ay-soh

When shall I call?
¿Quando acha mais conveniente que eu volte?
kwan-doh ah-sah myish kon-way-nee-ehn-tay kay oh vohl-tay

Thanks ever so much for your hospitality.
Muitissimo obrigado pela sua hospitali-
moo tees see-moh oh bree gah doh pay lah soo ah ohs pit ahl-ee-
dade.
dah-day

We have enjoyed ourselves very much.
Divertimos-nos muitissimo.
dee-vehr-tee-mohs-nos moo-tees-see-moh

At the Railroad Station

When will the train start?
¿Quando partirá o trem?
kwan-doh per-teer-rah oo tryehm

What time shall we arrive at.....?
¿A que horas chegaremos a.....?
ah kay or-rahs shay-gahr-ray mohs ah.....

I want a cab.
Quiero un coche.
kee-air-oh oon koh-chay

Take me to.....Hotel.
Lléveme al Hotel.
ll'ay-vay-may ahl oh-tell

How much do I owe you?
¿Cuánto le debo?
kwahn-toh lay day-boh

Please pay the driver.
Sírvase pagar al cochero.
seer-vah-say pah-gahr ahl koh-chay-roh

About Town

What is there of interest in this town?
¿Qué cosas interesantes hay en este ciudad?
kay koh-sahs in-tay-ray-sahn-tays ah'ee chn chs-teh see-oo-dahd

Which way shall we go?
¿Por que camino debemos ir?
porr kay kah-mee-noh day-bay-mohs e-er

How much will it cost?
¿Cuanto costará?
kwahn-toh kohs-tah-rah

What is the name of this street?
¿Qué calle es esta?
kay kahl-l'yay ess ess-tah

Where can I buy.....?
¿Donde puedo comprar.....?
don-day poo'ay-doh kohm-prahr

Where is the Post-Office?
¿Donde está la oficina de correos?
don-day ess-tah lah oh-fee-see-nah day kor-ray-ohs

Where is the United States Consulate?
¿Dónde está el Consulado de los Estados Unidos?
don-day ess-tah ell kon-soo-lah-doh day lohs chs-tah-dohs yoo nee dohs

Direct me to a good restaurant.
Dígame donde hay un buen restaurant.
dee-gah-may don-day ah'ee oon boo'en ress-tahw-rahnt

Take me to.....railroad station.
Lléveme a la estacion de.....del ferro-carril.
ll'yai-vay-may ah lah ess-tah-see-ohn day .....dell fehr-roh kah-reel

Meet me at — o'clock.
Espéreme en — a las—
ess-pay-ray-may ehn— ah —las—

I want a cab.
Desejo uma carruagem.
day-say-joh oo-mah kahr-roo-ah-jaym

Take me to....Hotel.
Leve-me ao hotel.....
lay-vay may ahoh oh-tell

How much do I owe you?
¿Quanto lhe devo?
kwahn-toh lay day-voh

Please pay the driver.
Se faz favor pague ao cocheiro.
say fawish fah-vohr pah-gay ahoh koo-shay-roh

About Town

What is there of interest in this town?
¿Quaes são os pontos mais interessantes
kwa-ish sah-oon ohs pohn-tohs my-ish een-tair-ray-sahn-tays
n'esta cidade?
n'es-tah see-dah-day

Which way shall we go?
¿Que direcção deveremos tomar?
kay deer-ray-sahon day-vay-ray-mos toh-mahr

How much will it cost?
¿Qual será o custo?
kwahl say-rah oh koos-toh

What is the name of this street?
¿Como se chama esta rua?
koh-moh say shah-mah ehs-tah roo-ah

Where can I buy....?
¿Onde posso comprar.....?
ohn-day pos-soh kohm-prahr.....

Where is the Post-Office?
¿Onde é o Correio-Geral?
ohn-day ay oh kor-ray-oh jay-rall

Where is the United States Consulate?
¿Onde é o Consulado dos Estados Unidos?
ohn-day ay oh kohn-sool-lah-doh dohs ehs-tah-dohs oo-nee-dohs

Direct me to a good restaurant.
Indique-me um bom restaurante.
een-dee-kay may oom bohm rays-tow-rahn-tay

Take me to.....railroad station.
Leve-me á estação da estrada de ferro.....
lay-vay-may ah es-tah-sahon dah ehs-trah-dah day fay-roh

Meet me at.....o'clock.
Espere-me ás .....horas.
es-pair-ray may ahs.....or-rays

Where can I buy some post-cards?
¿Donde puedo comprar unas postales?
don-day poo-ay-doh kohm-prahr oo-nahs pohs-tah-lays

I thank you for your courtesy.
Le doy las gracias por su fineza.
lay doy lahs grah-see-ahs por soo fee-nay-sah

Give me a match, please.
Haga el favor de darme un fosforo.
ah-gah el fah-vohr day dahr-may oon fohs-foh-roh

Where is the telegraph office?
¿Donde está la oficina del telégrafo?
don-day ess-tah lah oh-fee-see-nah dell tell-lay-grah-foh

Give me the names of the best theaters.
Dígame los nombres de los mejores teatros.
dee-gah-may lohs nom-brays day lohs may-hoh-rais tay-ah-trohs

What is playing there at present?
¿Qué función dan allí ahora?
kay foon-see-ohn dahn ahl-l'yee ah-oh-rah

We must get back by — o'clock.
Debemos estar de vuelta a las—
day-bay-mohs ess-tahr day voo'ell-tah ah lahs

We will return now.
Regresaremos ahora.
ray-gray-sah-ray-mohs ah-oh-rah

At the Hotel

I desire to engage a room.
Deseo tomar un cuarto—
day-say-oh toh-mahr oon kwahr-toh—

What are your lowest terms?
¿Cual es su precio más bajo?
kwahl ess soo pray-see-oh mahs bah-hoh

I want a room with two beds.
Deseo un dormitorio con dos camaras.
day-say-oh oon dor-mee-toh-ree-oh kohn dohs kah-mah-rahs

Call me at.....o'clock.
Llámeme a las.....
ll'yah-may-may ah lahs.....

I want my clothes pressed.
Deseo que me planchen la ropa.
day-say-oh kay may plahn-chen lah roh-pah

I want them early tomorrow.
La necesito mañana temprano.
lah nay-say-see-toh mah-n'yah-nah tehm-prah-noh

Where can I buy some post-cards?
¿Onde posso comprar alguns cartões postaes?
ohn-day poo-soh kom-prahr ahl-goonsh kahr-toy-ohs pos-tah-ays

I thank you for your courtesy.
Muitissimo obrigado pela sua gentileza.
muy-tees-see-moh oh-bree-gah-doh pay-lah soo-ah jen-tel-lay-sah

Give me a match, please.
Dê-me um phosphoro se faz favor.
day-may oon fos-fohr-roh say fawish fah-vohr

Where is the telegraph office?
¿Onde é a estação dos telegraphos?
on-day ay ah ehs-tah-sah-ohn dohs tel-lay-grahf-fos

Give me the names of the best theaters.
Dê-me o nome dos melhores theatros.
day-may oo noh-may dohs mail-yor-rays tay-ah-trohs

What is playing there at present?
¿O que estão representando lá hoje?
oh kay ehs-tah-on ray-pray-sen-tahn-doh lah oy-jay

We must get back by.....o'clock.
Nós devemos voltar ás .....horas.
nohs day-vay-mohs vohl-tahr ahs.....oh-rahs.

We will return now.
Agora vamos embora.
ah-gor-rah vah-mohs em-boh-rah

At the Hotel

I desire to engage a room.
Desejo um quarto.
day-say-joh oom kwar-toh

What are your lowest terms?
¿Quaes são os seus menores preços?
kwaysh sah-oon ohs say-ohs may-nohr-rays pray-sohs

I want a room with two beds.
Quero um quarto com duas camas.
ker-roh oom kwar-toh kohm doo-ahs kahm-mahs

Call me at.....o'clock.
Chame-me ás .....horas.
shah-may may ahs.....oh-rahs

I want my clothes pressed.
Desejo a minha roupa passada.
day-say-joh ah meen-yah roh-pah pah-sah-dah

I want them.
Desejo-as.
day-say-joh ahs.

Where is the hairdresser's?
¿Dónde está la peluquería?
don-day ess-tah lah pay-loo-kay-ree-ah

I want a hot bath.
Deseo un baño caliente.
day-say-oh oon bah-n'yoh kah-lee-ehn-tay

Bring me some hot water.
Tráigame un poco de agua caliente.
try-gah-may oon poh-koh day ah-gwah kah-lee-ehn-tay

What is your name?
¿Cómo se llama usted?
koh-moh say ll'yah-mah oo'sted

I want my (tea, coffee, chocolate) in my room in the morning.
Deseo el (té, café, chocolate) por la ma-
day-say-oh ell (tay, kha-fay, choh-koh-lah-tay) porr la mah-
ñana en mi cuarto.
n'yah-nah ehn mee kwahr-toh

I want these clothes washed.
Deseo que me laven esta ropa.
day-say-oh kay may lah-vehn ess-tah roh-pah

When can I have them back?
¿Cuando estará lavada?
kwahn-doh ess-tah-rah lah-vah-dah

Bring me some soap and towels.
Tráigame jabón y toallas.
try-gah-may hah-bon ee toh-ahl-l'yahs

Direct me to the.....Bank.
Dígame donde está el Banco.....
dee-gah-may don-day ess-tah ell bahn-koh

Give me the bill.
Deme la cuenta.
day-may lah kwehn-tah

Please forward my mail to this address.
Haga el favor de remitir mi correspondencia
ah-gah ell fah-vohr day ray-mee-teer mee koh-ress-pon-dehn-see'ah
á esta dirección.
ah ess-tah dee-reck-see-on.

I do not understand Spanish.
No comprendo el español.
noh kom-prehn-doh ell ess-pah-n'yohl

Can I get a tramcar near here?
¿Puedo tomar un tranvía por aquí cerca?
poo-ay-doh toh-mahr oon trahn-vee-ah porr ah-kee ser-kah

Where is the hairdressers?
¿Onde è o cabelleireiro?
ohn-day ay oo kah-bell-lay-ray-roh

I want a hot bath.
Desejo um banho quente.
day-say-joh oom bahn-yoh ken-tay

Bring me some hot water.
Traga-me agua quente.
trah-gah may ah-gwah ken-tay

What is your name?
¿Como se chama?
koh-moh say shah-mah

I want my (tea, coffee, chocolate) in my room in the morning.
Desejo o meu (chá, café, chocolate) no meu quarto pela manhã.
day-say-joh oo may-oh (shah, kah-fay, show-koh-lah-tay) noh may-oh kwar-toh pay-lah mahn-yah

I want these clothes washed.
Desejo esta roupa lavada.
day-say-joh ehs-tah roh-pah lah-vah-dah

When can I have them back?
¿Quando estará prompta?
kwahn-doh ehs-tah-rah prohmp-tah

Bring me some soap and towels.
Traga-me sabão e toalhas.
trah-gah may sah-bah-oh ay toh-ahl-yahs

Direct me to the..... Bank.
Indique-me o Banco..... se faz favor.
een-dee-kay may oh bahn-koh.....say fawish fah-vohr

Give me the bill.
De-me a conta.
day-may ah kohn-tah

Please forward my mail to this address.
Se faz favor remetta toda a minha correspondencia para este endereço.
say fawish fah-vohr ray-met-tah toh-dah ah meen-yah kohr respon-den-see-ah pah-rah ehs-tay en-dehr-ray-soh

I do not understand Portuguese.
Não comprehendo Portuguez.
noun kohm-pray-en-doh pohr-too-gays

Can I get a tramcar near here?
¿Onde posso tomar o bonde proximo aqui?
ohn-day pos-soh toh-mahr oh bohn-day prahs-see-moh ah-kee

In the Stores

I want to buy.....
Necesito comprar.....
nay-sah-see-toh kom-prahr

Show me.....
Enséñeme.....
ehn-say-n'yai-may

This is too small (large).
Este es demasiado pequeño— (grande).
ess-tay ess day-mah-see-ah-doh pay-kay-n'yoh—(grahn-day)

What is the price of this?
¿Cuanto vale este?
kwahn-toh vah-lay ess-tay

I will buy this.
Compraré este.
kom-prah-ray ess-tay

What is that?
¿Qué es eso?
kay ess ess-soh

Have you nothing better?
¿No tiene usted nada mejor?
noh tee-ay-nay oo'sted nah-dah may-horr

Have you anything cheaper?
¿Tiene usted algo más barato?
tee-ay-nay oo'sted ahl-goh mahs bah-rah-toh

I don't care for any of these.
No me gusta ninguno de estos.
noh may goos-tah nin-goo-noh day ess-tohs

I will take them (it).
Los llevaré —lo llevaré.
lohs ll'yai-vah-ray—loh' ll'yai-vah-ray

I am living in.....Street, No.....
Vivo en la calle..... número.....
vee-voh ehn lah kahl-l'yay.....noo-may-roh.....

Send them to this address.
Envielos a esta dirección.
ehn-vee'ay-lohs ah ess-tah dee-reck-see-on

At the Hairdresser's

I want my hair cut.
Necesito cortarme el pelo.
nay-say-see-toh kohr-tahr-may ell pay-loh

I want a shampoo.
Deseo un champú (seco).
day-say-oh oon cham-poo (say-koh)

(English—Portuguese)

In the Stores

I want to buy.....
Desejo comprar.....
day-say-joh kohm-prahr.....

Show me.....
Se faz favor mostre-me.....
say fawish fah-vohr mohs-tray may.....

This is too small (large).
Este é muito pequeno (grande).
es-tay ay moo-eet-toh pay-kay-noh (grahn-day)

What is the price of this?
¿Quanto custa isto?
kwan-toh koos-tah ees-toh

I will buy this.
Comprarei este.
kohm-prahr-ray ehs-tay

What is that?
¿Oque é isso?
oh-kay ay ees-soh

Have you nothing better?
¿Não tem nada melhor?
noun tym nah-dah mail-yohr

Have you anything cheaper?
¿Tem outro mais barato?
tym oh-troh mah-eesh bah-rah-toh

I don't care for any of these.
Não desejo nenhum d'estes.
noun day-say-joh nain-oom day'es-tays

I will take them (it).
Tomarei-os (tomarei-o).
toh-mah-ray-ohs (toh-mah-ray-oh)

I am living in .....Street, No.....
Moro na Rua..... No.....
mor-roh nah roo-ah.....noom-may-roh

Send them to this address.
Remetta-os para este endereço.
ray-may-tah ohs pah-rah ehs-tay en-day-ray-soh

At the Hairdresser's

I want my hair cut.
Desejo meu cabello cortado.
day-say-joh may-oh kah-bail-loh kor-tah-doh

I want a shampoo.
Desejo-o cabello lavado.
day-say-joh oo kah-bail-loh lah-vah-doh

Yes, that is all right.
Sí, está bien.
see ess-tah bee'en

Wave my hair and curl it a little.
Ondée el pelo y ricelo un poco.
ohn-day'ay ell pay-loh ee ree-say-loh oon poh-koh

Bring me a little powder —white —pink.
Tráigame algún polvo —blanco —rosa
try-gah-may ahl-goon poll-voh —blahn-koh—roh-sah

How much do you charge?
¿Cuanto carga usted?
kwahn-toh kahr-gah oo'sted

Yes, that is all right.
Sim senhor, está muito bem.
seem sain-yohr ehs-tah moo-ee-toh bym

Wave my hair and curl it a little.
Desejo o meu cabello um pouco frisado e
day-zay-joh oo may-oh kah-bail-loh oom poh-koh free-zah-doh ay
ondulado.
ohn-doo-lah-doh

Bring me a little powder—white—pink.
Traga-me um pouco de pó de arroz— branco —
trah gah-may oom poh-koh day paw day ahr-rohs brahn-koh—
carmim.
kahr-meen

How much do you charge?
¿Quanto cobra o senhor?
kwan-toh koh-brah oo sain-yohr

WEIGHTS AND MEASURES

Metric System

Linear Measure

Millimeter	0.001	Meter	0.0394 Inch
Centimeter	0.01	Meter	0.3937 Inch
Meter	1.	Meter	39.37 Inches (1.09 Yards)
Kilometer	1,000.	Meters	0.62137 Mile

Surface Measure

Are	100	Square Meters	119.6 Square Yards
Hectare	10,000	Square Meters	2.471 Acres

Dry Measure

Liter	1	Liter	.908 Quarts
Dekaliter	10	Liters	1.135 Pecks
Hectoliter	100	Liters	2.837 Bushels

Avoirdupois Weight

Milligram	001	Gram	.0154 Grain
Gram	1.	Gram	15.432 Grains
Hectogram	100.	Grams	3.5274 Ounces
Kilogram	1,000.	Grams	2.2046 Pounds
Metric Ton	1,000,000.	Grams	2204.6 Pounds

WEIGHTS AND MEASURES

United States Standard

Linear Measure

Inch	2.54	Centimeters
Foot	.3048	Meters
Yard	.9144	Meters
Rod	5.029	Meters
Mile	1.6093	Kilometers

Square Measure

Square Inch	6.452	Square Centimeters
Square Foot	.0929	Square Meters
Square Yard	.836	Square Meters
Square Rod	25.29	Square Meters

Surface Measure

Acre	.4046	Hectare
Square Mile	259.	Hectares

Cubic Measure

Cubic Inch	16.39	Cubic Centimeters
Cubic Foot	.0283	Cubic Meter
Cubic Yard	.7645	Cubic Meter
Cord	3.624	Cubic Meters

Dry Measure

Quart	1.101	Liters
Gallon	3.785	Liters
Peck	8.809	Liters
Bushel	35.24	Liters

Avoirdupois Weight

Ounce	28.35	Grams
Pound	.4536	Kilograms
Ton (long)	1.0161	Metric Ton
Ton (short)	.9072	Metric Ton

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